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A

METHODICAL INTRODUCTION

TO THE

THEORY AND PRACTICE

OF THE

ART OF MEDICINE.

THE SECOND EDITION,

ENLARGED AND CORRECTED.

By DAVID MACBRIDE, M.D.

IN TWO VOLUMES.

VOL. I.

DUBLIN:

PRINTED FOR W. WATSON, [No. 7.] CAPEL-STREET.

M.DCC.LXXVII.

1592

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PREFACE.

So great is the multitude of Medical Writings already extant, that adding to the heap may be deemed an unneceſſary labour, eſpecially if the new book ſhould be little more than a compilation; and ſuch it inevitably muſt be, if it profeſſes to give a *General View of the Theory and Practice of Phyſic.*

But in this, as in every other ſcience, ſtudents require to have the principal matters ſelected from approved writers, and arranged according to ſome connected ſcheme; and, as many of the ſyſtems are obſolete, ſome too voluminous or ill digeſted, and others too compendious or obſcure, it is apprehended that a new one may have ſtill ſome claim to the public favour, provided it be formed agreeably to nature, is of moderate length, and written ſo as to be intelligible to any perſon who has a competent ſhare of preliminary knowledge, in anatomy and phyſiology, chemiſtry and materia medica. But how far the following *Attempt towards a Medical Syſtem*, may be found to anſwer this

this deſcription, muſt be left to the determination of the judicious and candid.

It contains the ſubſtance of a Courſe of Lectures, that were read in the winter 1766, and for ſome ſeaſons afterwards, in Dublin, and conſiſts of two parts.

The Firſt, or inſtitutionary Part, divided into ſix books, explains the principles on which the Art of Medicine is founded, and gives a general idea, ſuch as may be ſufficient for thoſe who read phyſic only as a branch of natural philoſophy.

A ſummary view of the *Animal Oeconomy*, as carried on during the time of perfect health, is given in the firſt Book; and ſome neceſſary diſtinctions are laid down, with reſpect to the general ſtructure of the human body.

The ſecond treats of the *Pathology*, or morbid ſtate; and in the courſe of this inquiry, diſeaſes are analyſed, by conſidering ſeparately, the cauſes and conſequences of their ſeveral ſymptoms.

A *General Hiſtory* of *Diſeaſes* follows, and fills up the third Book; and herein is ſhewn the Syſtematic Method of arranging them, into

into Claſſes, Orders, Genera, and Species; ſo as to bring thoſe that agree in the greater number of circumſtances, and demand nearly ſimilar remedies, as much as poſſible under one point of view.

This is the method which *Sydenham* firſt ſuggeſted, and other great men have ſince wiſhed to ſee carried into execution, and which is now adopted by the Firſt Medical School, and taught by the Firſt Medical Profeſſor, of the preſent times.

As this way of claſſing diſeaſes is hitherto but little known, an abſtract is added (by way of Appendix to the firſt Volume) of the ſchemes of arrangement, which have already appeared, in order to enable the reader to comprehend the matter more fully, and afford him a ready opportunity of comparing theſe, with the one that is now offered to the public; and thus, poſſibly, prove the means of ſtriking out others, that ſhall be ſtill more ſatisfactory.

The fourth Book contains the *Semeiology*, or doctrine of Signs; the fifth, ſome general rules for the *Preſervation of Health*; and the ſixth, the General Methods of *Curing Diſeaſes*.

The

The Second, or Practical Part, compriſes the deſcriptions of the ſeveral ſpecies of diſeaſes, together with the methods of treatment; and in order to compleat the ſyſtem, and treat of every complaint that can fall under the care of either Phyſician, Surgeon, or Accoucheur, this part is meant to conſiſt of twelve books; but of theſe, only nine are now preſented to the public, including thoſe diſorders that lie more immediately within the phyſician's province.

They are diſtributed into nine orders, under the denominations of *Fevers*; *Inflammations*; *Fluxes*, or *preternatural diſcharges*; *Painful Diſeaſes*; *Spaſmodic Diſeaſes*; *Inabilities* and *Privations*; *Aſthmatic Diſeaſes*; *Mental Diſeaſes*; and *Cachexies*, or *Humoral Diſeaſes*. Theſe are all that the Author has hitherto found leiſure to accompliſh, and as to the three remaining books, containing the *local*, *ſexual*, and *infantile*, diſeaſes, which for the moſt part are committed to the management of Surgeons, and Accoucheurs, he cannot poſitively engage to fill them up, but having laid down the plan, may probably leave it to ſome other hand to finiſh the ſuper-ſtructure.

Although it be acknowledged that the preſent work is in great meaſure compiled,

piled, yet both with regard to form, and the matter contained in it, 'tis preſumed that it will be found, in many reſpects, original: It was once intended to quote the various writers, who have been made uſe of; but as numerous references take off the reader's attention, and, as it is not of much importance to ſtudents (for whoſe ſervice the inſtitutions are principally deſigned) to know who are the authors of a particular diſtinction, or opinion, ſuch notes have been almoſt entirely omitted in the theoretical part; in the practical part indeed, the original authors are in general pointed out, who have either given accurate deſcriptions of particular diſeaſes, or laid down ſucceſsful methods of cure.

In the preſent Edition the practical part is conſiderably enlarged, and among the additions, are certain hiſtories of diſorders that may be conſidered as entirely new; ſince they are either ſuch as have never been communicated to the public before, or though publiſhed, the deſcriptions lie ſcattered in different books. There are two of theſe which particularly deſerve the notice of practitioners, the *Angina Pectoris*, and *Morbus Veſicularis*; the former, of all maladies the moſt mortal; the latter, one of the moſt tedious:

tedious: accordingly, a pretty full account is given of each, and a ſingular caſe of the *Angina Pectoris*, which muſt be the more acceptable, as it is the only one yet known, wherein a cure has been effected, in a confirmed ſtate of that diſeaſe.

DUBLIN,
1ſt March, 1777.

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PART I.

A

METHODICAL INTRODUCTION

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BOOK I.

GENERAL DESCRIPTION OF THE HUMAN FABRIC, AND SUMMARY VIEW OF THE ANIMAL OECONOMY.

CHAP. I.

General Diviſion of the Human Body.

AS all the different diſeaſes to which mankind is ſubject, are only ſo many deviations from the healthy ſtate, the foundation of the medical art, whoſe buſineſs is to prevent, alleviate, or remove diſeaſes, muſt be laid in a knowledge of the ſtructure of the human body, and of the animal œconomy, as carried on during the time of perfect health, when people are entirely free from every painful or uneaſy ſenſation, and can exerciſe fully

all the powers of mind and body, which are ſuited to the various circumſtances of age, ſex, and conſtitution; and hence it is, that anatomy and phyſiology ought always to be the firſt objects of the ſtudent's attention: but as we preſume our readers to be already inſtructed in theſe preliminary branches, we ſhall do nothing more than refreſh the memory by a ſummary view, and make ſome neceſſary diſtinctions.

When we conſider the general texture of the human body, without regarding the particular form, ſituation, or connection of its ſeveral organs, inſtead of dividing it, as hath heretofore been done, only into ſolids and fluids, or into parts containing and parts contained, let us make three diviſions, and comprize the whole under the denominations of vaſcular, nervous, and cellular ſyſtems.

In the vaſcular ſyſtem let us comprehend all that part of the body which conſiſts of tubes, or continued canals, filled with blood and other groſs fluids:—let the nervous ſyſtem include the medullary part of the brain, and the ſpinal marrow, with all the chords and filaments which ſpring from either, and which are preſumed to be imbued with a moſt ſubtile fluid:—and by cellular ſyſtem let us underſtand all thoſe pores and interſected cavities, filled with lymphatic and oily fluids, which are formed by the various intertexture of veſſels and nervous filaments, and of ſolid fibres and lamellæ, that bind theſe together, and thus make up the remainder of the human fabric.

By

By this ſcheme of diviſion we ſhall take in both ſolids and fluids, and thus avoid the difficulty of fixing the preciſe limits of either.

VASCULAR SYSTEM.—The vaſcular ſyſtem hath the heart for its center; that is to ſay, all the tubes or canals which are comprehended in this diviſion, either carry fluids out from the heart, or return and convey them to it.

Though all animal motion ſeems to derive from the nervous ſyſtem, and although the heart, like every other muſcle, can act no longer than the communication through the nerves which are beſtowed on it remains free, yet ſtill there is a neceſſity for diſtinguiſhing between the nervous and vaſcular ſyſtems; becauſe it will appear, when we come to inquire into the nature of diſeaſes, that there ſhall be evident diſorder in one, while little or none can be perceived in the other.

The vaſcular ſyſtem comprehends every ſpecies of artery, vein, ſinus, duct, and abſorbent veſſel, and may be diſtinguiſhed into circulatory veſſels, ſecretory veſſels, excretory veſſels, and abſorbents.

The circulatory veſſels include all the arteries, which, ſpringing from the aorta and pulmonary artery, carry out the general maſs of blood; and all the veins, which being reflected back, and uniting at the two great venous ſinuſes, return it, and thus maintain a perpetual circulation.

By ſecretory veſſels we underſtand all thoſe minute tubuli in the different organs that are adapted for the purpoſes of ſecretion, and which

are preſumed to ſeparate, and ſtrain off the different humours from the general maſs.

By excretory veſſels are meant thoſe tubes or ducts (as they are moſt frequently termed) which alſo belong to the different organs of ſecretion, whoſe office is to carry off the humours that are ſeparated, and either convey them to appropriated receptacles, where ſome of them are depoſited, or diſcharge them out of the body.

The abſorbents are tubes furniſhed with valves, which convey fluids that are taken up by abſorption, from the external ſurface of the body; from all the larger cavities containing the different viſcera, and from the ſurfaces of theſe viſcera; from the whole cellular ſyſtem; and from the alimentary canal.

The fluids that are taken up by the abſorbents, are ſuppoſed to be all, or moſtly, carried to the canal, termed the thoracic duct, which empties itſelf into the left ſubclavian vein; and this again, very quickly, unloads itſelf at the right auricle of the heart.

The abſorbents are of two kinds; lacteals, that take their riſe from the alimentary canal, and, running along the meſentery, convey the chyle to the general receptacle of that fluid; and valvular lymphatics, which ſpring from all the other different places that were mentioned as giving riſe to abſorbents, and drink up the lymph and other ſubtile fluids or matters, which come into contact with the various ſurfaces and cavities, where there are bibulous pores to admit them.

NERVOUS

NERVOUS SYSTEM. The brain is the baſis of the nervous ſyſtem.

Since it is obſervable in certain diſeaſes, that muſcular ſtrength ſhall be totally exhauſted, and yet the powers of ſenſation and perception remain intire; and on the other hand, that the muſcles ſhall ſometimes exert prodigious ſtrength, while the ſenſes are all locked up: we ſeem authorized in ſuppoſing a diſtinction in the nervous ſyſtem, and that there are two ſets of nerves; the one, which may be termed ſenſory, as being adapted principally to the purpoſes of perception and ſenſation, and beſtowed on the ſeveral organs of ſenſe, internal and external; while the other, that may be called motory, is blended with the muſcular fibres.

The old phyſiologiſts actually did make a diſtinction, and imagined that the different appearance of the nervous chords ſerved to juſtify it, ſince ſome are found of a firmer and harder texture than others; theſe were ſuppoſed to belong particularly to the muſcles, while the more ſoft and pulpy nerves were looked on as appropriated to the organs of ſenſe: but more accurate obſervers have found that this mode of diſtribution is not conſtant; and that there is no poſſibility, from mere anatomical inveſtigation, to ſay that there is any material difference between the nerves that lead to the organs of ſenſe, and thoſe which are beſtowed on the muſcular fibres; for every nervous chord that is large enough, and lies conveniently for making experiments on, in the living animal, is found to contain or tranſmit ſome ſubtile

ſubtile fluid, which is the immediate inſtrument of both motion and ſenſation.

CELLULAR SYSTEM.—But all the different ſpecies of veſſels, which either riſe from, or terminate at the heart; and all the nervous chords, and filaments, which ſpring from the brain, or ſpinal marrow, however variouſly they may be combined, diſpoſed, or interwoven, are univerſally connected, and bound together, by a fibrous and laminated ſubſtance, which is not endowed, like the living ſolids, with either ſenſe of feeling, or power of motion.

By this mechaniſm, the life and health of animals are maintained; which could not be, if every fibre in the body were a living ſolid, and if the ſolids of the cellular ſyſtem were endowed with the like powers of motion and ſenſation as thoſe which help to conſtitute the vaſcular and the nervous ſyſtems. For we ſee, that the nerves and different ſpecies of veſſels being ſuſceptible of feeling and irritation, have their motions diſordered, or interrupted, by the application of various matters, which we know may lie, without injury, in the cavities of the cellular ſyſtem, among the inert ſolids that compoſe this part of the animal fabric. But this matter will be fully illuſtrated hereafter, when we come to conſider the riſe and progreſs of certain diſeaſes, where it will appear that the fluids in the cellular ſyſtem may either ſtagnate or deviate far from the ſound ſtate, without diſordering the motions of the living ſolids. It is neceſſary therefore to make a diſtinction with reſpect to the ſolids, and to conſider them as ſolida viva, and ſolida inertia.

The

The idea that we are to form of the inert ſolids is, that they not only conſtitute ſuch parts of the body as have neither nerves nor veſſels, (namely, the cuticle and its continuations; the nails; the hairs; great ſhare of the ſubſtance of bones, cartilages, ligaments, tendons, and thin membranes;) but that theſe inert ſolids, alſo form the connecting medium every where between the living ſolids, binding together every minute veſſel and nervous filament, and that as there are innumerable nerves and veſſels in all parts of the body, excepting thoſe above-mentioned, which no eye can trace; yet, if we reaſon from analogy and ſay, that the ſmalleſt branches and filaments are like the viſible trunks and chords, then the tranſverſe ſections of theſe muſt be circular; and conſequently when they come to be interwoven, or laid together, they muſt univerſally leave intermediate pores, or minute cavities: hence we may underſtand, that though there be ſome parts of the body which have neither nerves nor veſſels; i. e. no living ſolids; yet there is no place in the whole fabric whereunto the cellular ſyſtem does not extend, and where there is not ſome mixture of the inert ſolids.

That the cellular ſyſtem extends itſelf univerſally throughout the whole frame, and has a general and free communication, ſeems fully proved by the diſeaſes termed emphyſema and anaſarca, where, in the firſt inſtance, elaſtic air is found to diffuſe itſelf, and paſs from pore to pore, and cell to cell, to the innermoſt receſſes of the body; and in the latter caſe, a thin watery fluid is often ſeen to ſpread itſelf in like manner.

In

In the natural and healthy ſtate, the cavities of the cellular ſyſtem are filled either with lymph or with oil; conſequently, it requires to be diſtinguiſhed into two parts, the lymphatic and adipoſe.

The pores, or minute cavities of the lymphatic part, are always to be underſtood as interpoſed between every even the ſmalleſt veſſel and nervous fibril; whereas the adipoſe cells are not ſo univerſally extended, the fat or animal oil being always lodged in diſtinct bags or veſicles.

Wherever there is a neceſſity for oily fluids in any particular part of the body, there is a certain apparatus peculiarly adapted for containing and hindering them to ſpread further than is requiſite for the purpoſes of the animal œconomy; for if things were not ſo ordered, this oil would be liable to diffuſe itſelf as freely throughout the cellular ſyſtem at large, and would be equally diſtreſſing and fatal, with the ſpreading of water in the anaſarca, or of elaſtic air in the emphyſema.

CHAP. II.

General View of the Fluids.

IF the alimentary canal be excepted, and the aſpera arteria, with its productions, which are occupied by atmoſpheric air, all the various canals and cavities, in every part of the body, are filled either with blood, or humours ſeparated from the blood, or with chyle.

The

The whole mafs of animal fluids may therefore be compriſed under one or other of theſe three heads, each of which ſhall be briefly conſidered:

BLOOD.—While the blood is warm, and flowing from the veſſel, it appears of an uniform red colour and conſiſtence, feeling to the touch viſcid and tenacious; but when it cools, it loſes its fluidity, and ſettles into a coagulated maſs, which is of different degrees of firmneſs in different ſubjects.

After a few hours, more or leſs, according to the ſtate of the atmoſphere, and other circumſtances, which we ſhall have occaſion to take notice of hereafter, this coagulated maſs of blood emits a moiſture from every part of its ſuperficies, which by degrees collects into a quantity of watery fluid, ſufficient to detach the coagulum from the ſides of the veſſel which received it, and ſet it afloat like an iſland in the midſt of a liquid, which is called Serum, as the red coagulated cake is termed Craſſamentum.

The ſerum in the healthy ſtate is almoſt colourleſs; at other times it is yellowiſh, or perhaps of a greeniſh hue, while the top of the craſſamentum has different degrees of firmneſs, and puts on a different appearance with reſpect to colour, according to the age, ſex and, ſtate of health of the ſubject, from whence the blood is drawn.

The ſerum of blood, like the white of an egg, coagulates, when alcohol, or any of the mineral acid ſpirits are mixed with it, or when heated to about the 160th degree of Fahrenheit's ſcale; but otherwiſe it continues in the liquid ſtate.

The

The craſſamentum is compoſed of a peculiar ſubſtance which gives redneſs to the blood, and of what phyſiologiſts term the Coagulable Lymph, from its coagulating ſpontaneouſly. This coagulable lymph may be ſeparated from the red part in two ways; either, by ſtirring blood that is freſh drawn, with a whiſk, when the lymph, coagulating in a ſhort time, will adhere to the twigs, and appear like a firm membrane of a whitiſh colour, compoſed of fibres interwoven with each other; or, by placing a piece of the craſſamentum on a ſtrainer, and pouring on water repeatedly, until the red particles being all waſhed away, ſhall leave only the whitiſh fibrous ſubſtance behind.

Neither chemiſts nor phyſiologiſts are as yet perfectly acquainted with the nature of this colouring matter, which is thus capable of being detached from the ſerum and coagulable lymph; the only thing in which they ſeem to be thoroughly agreed is, that the redneſs of blood does not depend on the union of ſix ſerous or yellow globules, according to the notion which was taught by the celebrated Boerhaave, and which he appears to have embraced on the credit of Lewenhoeck, who imagined he ſaw with his glaſſes that ſix globules of ſerum, which when ſeparate were of a yellow colour, combined together to form one red globule.

The blood therefore was ſuppoſed to be a fluid, conſiſting of globules of different magnitudes, decreaſing in a regular ſeries; for the ſerous globule was ſuppoſed to be made up of ſix lymphatic globules, the lymphatic globule of ſix others ſtill finer, and ſo on, till they came to that which was held to be

be the fineſt and moſt ſubtile of all the animal fluids, namely, the nervous fluid.

According to Boerhaave's idea, the diameters of the veſſels alſo decreaſed in this regular ſeries, perfectly correſponding with the ſize of the globules; but theſe notions are now pretty much exploded; for notwithſtanding the microſcope has been carried to much higher degrees of perfection than it was in the hands of Lewenhoeck, people cannot perceive this union of the ſix globules, neither do the veſſels appear to decreaſe in that regular ſeries that Boerhaave imagined.

Some of the phyſiologiſts look on the red part of the blood, as chiefly conſiſting of oily or inflammable matter; while others deny that it is more inflammable, or yields more oil by diſtillation, than the reſiduum of the ſerum, or the fibrous ſubſtance that is formed of the coagulable lymph. Baron Haller conjectures, that the iron which is found in the earthy part of blood is particularly connected with the red particles, and this conjecture of his appears to be founded in truth, if we may believe the experiments of profeſſor Buchwald at Copenhagen, who publiſhed a ſmall diſſertation in 1762, "De Rubro Sanguinis Colore." Dr. Buchwald took a quantity of the white part of the craſſamentum from which the red particles had been entirely waſhed off, and calcined it, along with a certain portion of fixed alcaline ſalt; then he diſſolved this maſs in water; and, laſtly, added a ſolution of alum; but the colour was not changed by this addition of the alum.

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He then calcined a quantity of the red craſſamentum along with fixed alcaline ſalt, and having diſſolved the maſs, added ſolution of alum; this immediately turned blue, and yielded a portion of the blue pigment, called Pruſſian blue, which is a ſure teſt of the preſence of iron; hence Dr. Buchwald concludes, that the red colour of blood is owing to a mixture of ſome portion of ferruginous matter.

When we conſider how generally the ore of iron is diffuſed throughout the bowels of the earth, and how eaſily it may be diſſolved in water by means of ſaline particles, equally common, and being mixed with water, muſt be drunk by animals, and alſo enter into the juices of plants which ſerve them for food; it then ceaſes to be a wonder that traces of this metal ſhould be found in the blood.

In confirmation of this notion it may be obſerved, that the blood always becomes florid after a courſe of chalybeate medicines; but whether that ariſes chiefly from the addition of ferruginous matter, or whether it may not be owing to the increaſed motion which theſe medicines always produce, will admit of ſome diſpute; for it is always found, that the blood grows more red in proportion to the action and ſtrength of the veſſels.

The proportion of red is ſmall in reſpect of the other conſtituent parts, for one grain weight of this colouring matter, will tinge, in a perceivable degree, a thouſand of pure water.

So far with reſpect to the different parts of the blood, as they appear from ſpontaneous ſeparation; but phyſiologiſts have called in the aid of chemiſtry

to

to enable them the better to underſtand the nature of blood, and ſhew the different kinds of matter which conſtitute this fluid, as well as the animal ſubſtance in general; though it muſt be confeſſed that chemical analyſis does not exhibit the true principles, nor does it ſhew even ſuch as are produced in a ſtate of perfect ſimplicity; however, it enables us to ſpeak intelligibly concerning the changes which happen with reſpect to the combination of inſenſible particles in animal fluids, and is therefore of ſome uſe.

For as animal fluids conſiſt of different inſenſible particles, which are endowed with their ſeveral powers of elective attraction, they may be conſidered as chemical mixtures, capable of forming a variety of different combinations.

The chemical analyſis being of ſo little importance with reſpect to practical utility, we ſhall do little more than enumerate the different conſtituent parts, into which the blood may be reſolved by the force of fire.

There is, firſt, the watery part, which is by far the moſt abundant, not only in blood, but even in thoſe parts of the body wherein apparently there is great drineſs, hardneſs, and ſolidity. Bones, after they have been dried, and kept until they have become almoſt as hard as iron, have been found to yield by diſtillation one half their weight of watery fluid.

Secondly; there is the earthy part, which remains after every thing elſe has been raiſed and diſſipated, and which reſiſts the action of fire and water.

water. According to ſome phyſiologiſts, the earthy principle is the thing which gives firmneſs, ſolidity and coheſion to the animal ſubſtance. In that earth which remains after the diſtillation of the blood, there is found a ſmall portion of a metallic calx, which by proper management may be reduced to iron.

The third conſtituent part is the ſaline; this is partly of a fixed nature, remaining with the earth in the bottom of the retort; and partly volatile, riſing along with the watery and the oily parts in diſtillation.

The fourth is the oil, of which, in the blood of perſons in health, there is found to be about an eighth part.

Laſtly; there is the aerial part, which eſcapes entirely in the diſtillation, if the apparatus be not particularly contrived for preventing it: this being moſt abundant in the hardeſt and moſt ſolid parts of the animal ſubſtance, hath hence been held by many as the cementing principle on which firmneſs and coheſion particularly depend. This fixed air, which can only be ſeparated from bodies by the force of ſtrong fire, or which flies off from them while they are undergoing a ſpontaneous decompoſition, muſt never be confounded with the air which is mixed with the blood, or lodged in the pores of ſolid bodies, and which extricates itſelf from theſe in the exhauſted receiver of an air-pump.

Thus it appears from chemical analyſis, that the conſtituent parts of the blood, as well as of the

the ſolid ſubſtance of the human body, are watery, earthy, ſaline, oily or inflammable, and aerial.

SECRETED HUMOURS. All the different ſecreted humours are ſtrained off, or ſeparated from the blood in different parts of the body, by means of certain organs formed for that purpoſe.

Of theſe fluids ſome are ſo very ſubtile, that they do not fall under cognizance of the external ſenſes, ſo that their exiſtence can only be proved from analogy; others of the ſecreted humours are groſs, and may be ſubjected to chemical analyſis, and other modes of inveſtigation.

GROSS HUMOURS.—Theſe groſs fluids have been claſſed by ſome of the phyſiologiſts, who divide them, 1. Into watery, wherein the aqueous part of the blood predominates. 2. Mucous, wherein the more fixed or earthy part is evident. 3. Gelatinous, wherein the coagulable lymph is manifeſt: And 4. Oily, wherein the inflammable principle is conſpicuous.

Perhaps this ſcheme of diviſion is not altogether accurate; however, as it is the beſt that has hitherto been offered, we ſhall adhere to it, and conſider the general maſs of the groſs ſecreted humours as comprehended therein.

The watery humours in general are devoid of ropineſs or tenacity, and evaporate without coagulating, or leaving any remarkable portion of reſiduum.

The

The perſpirable matter; the urine; the tears; the humours of the eye; the fluid ſeparated by the ſalivary glands, and the pancreatic juice, are all held to be watery humours.

The mucous are diſtinguiſhable by their viſcidity; they are inſipid to the taſte, and for the moſt part without ſmell or colour, miſcible with water, but do not coagulate with heat, nor when mixed with the mineral acids, or ardent ſpirit; when evaporated over the fire, the mucous humours leave a conſiderable portion of reſiduum.

To this head belongs the ſlimy fluid, which defends the inſide of the mouth, noſe, and fauces, as well as the aſpera arteria, and all its branches diſperſed throughout the lungs; which alſo lubricates the whole extent of the alimentary canal, the uropoietic organs, and the inſides of the uterus and vagina.

The ſeminal fluid is reckoned among the mucous humours; but the ſynovia of the joints, and the ſlimy fluid contained in the tendinous ſheaths, partake full as much of the gelatinous as of the mucous quality.

The gelatinous humours, in the ſound and natural ſtate, are devoid of ropineſs or tenacity, and ſeem equally fluid with the watery; but on being heated they coagulate like the white of an egg; and when mixed with ardent ſpirit, or with ſtrong acids, they run into grumous flakes.

The lymph that is found in the valvular lymphatics is a gelatinous fluid, a proof that this is the fluid which occupies one part of the cellular ſyſtem,

ſyſtem, and bedews all the larger cavities. The liquor gaſtricus, and liquor inteſtinalis, that ouze from pores in the inner coats of the ſtomach and inteſtines, are gelatinous humours, and ſo have ſome phyſiologiſts imagined the liquor amnii, in which the fœtus ſwims.

The oily humours are chiefly diſtinguiſhed by their inflammability: to theſe we refer the animal oil of all kinds, whether it paſſes under the denomination of fat or marrow. Theſe fluids, as hath been already noticed, are, in the natural ſtate, always confined in diſtinct cells or veſicles, appropriated to that particular purpoſe.

The cerumen, or ear-wax, is reckoned among the oily fluids, and ſo are the bile and the milk, though perhaps not with the ſtricteſt propriety, as oil does not appear to be the predominant principle in either of theſe two laſt mentioned.

Of theſe various fluids, ſome are excrementitious, and thrown out of the body as ſuperfluous, or effete and uſeleſs; the reſt are retained in canals or receptacles, for anſwering different purpoſes in the animal œconomy: ſome of theſe which are retained are in conſtant motion; others are allowed to ſtagnate, either in cellular and veſicular cavities, or in cyſts particularly appropriated to that uſe.

SUBTILE FLUIDS. The ſubtile fluids, whoſe exiſtence we cannot actually prove, but which nevertheleſs is preſumed by the phyſiologiſts, are the nutritious lymph, and the nervous fluid.

NUTRITIOUS LYMPH.—The old phyſiologiſts conceived that there was ſome ſubtile fluid adapted for the purpoſes of nutrition, to which they gave the name of cambium; this they imagined was diſtributed throughout what they termed Poroſitates Carnium.

In like manner, the moderns preſume that there is a ſubtile lymph, which cannot be comprehended under any one of the aforementioned diviſions of ſecreted fluids, which anſwers the purpoſes of nutrition, and contains the particles that repair waſte, and add to the ſolid bulk of the body.

Whether this be the ſame with the nervous fluid, as ſome phyſiologiſts have taught, or whether it be a fluid ſui generis, whenever it is applied for the purpoſes of nutrition, we may ſuppoſe that it is applied not ſolely to the inſides of the minute veſſels, in which there is a perpetual flow, but chiefly to the pores or cellular interſtices in every part of the body.

Becauſe we know there are ſome parts of the animal ſtructure in which there are no veſſels, particularly the cuticle and its continuations; the nails; and the hairs; yet we ſee theſe parts are nouriſhed, and ſpeedily renewed, when at any time they are deſtroyed or abraded, which could not poſſibly take place if the nutritious matter were applied only to ſupply defects in the veſſels that are ſuppoſed to diſtribute it.

The general and free communication which obtains throughout the whole cellular ſyſtem, ſhews

ſhews how eaſily nutritious particles, when conveyed by a ſubtile fluid, may, in this way, be diffuſed over every part of the body.

NERVOUS FLUID.—Notwithſtanding the impoſſibility of demonſtrating a nervous fluid, or of ſaying preciſely in what manner the nerves are imbued with this ſubtile matter, yet, when we conſider the large quantity of blood which circulates through the veſſels of the brain, we can ſcarcely doubt, but a ſecretion is carried on there.

The nerves are the only apparent excretory ducts, but whether the fluid be conveyed in minute tubuli, or whether it be conducted along the filaments, like an electric fluid, or whether it be the electric fluid itſelf, as ſome phyſiologiſts have imagined, are points that probably will never be determined; and we muſt reſt contented, with only knowing in general, that ſenſation and motion depend on the free tranſmiſſion of ſomewhat which is derived from the brain, and paſſes along the nerves to the ſeveral organs of ſenſe, and to every muſcular fibre.

CHYLE.—The only animal fluid that now remains to be mentioned is the chyle, which is taken up by the lacteals from the alimentary canal, where it is prepared from the different ſubſtances we eat and drink; theſe, when mixed with certain portions of ſaliva, bile, and the other juices ſupplied by the pancreas, and coats of the ſtomach and inteſtines, paſs through a fermentatory proceſs of a peculiar kind, which is termed digeſtion.

The reſult of this proceſs is the fluid now under conſideration, which, being abſorbed by the lacteals, is by them conveyed to the thoracic duct, and from thence poured into the left ſubclavian vein; the whole of the fluid, however, wherewith the lacteals are filled, is not chyle, but partly water, with a ſolution of ſuch ſubſtances as are not capable of being altered by digeſtion.

Thus have we taken a general view of the three ſyſtems, which, being combined together, make up the animal machine.

CHAP. III.

Powers that animate the Human Body.

IN compliance with the mode of expreſſion uſual among medical writers, the corporeal part of man is called a machine; but the reader is not to expect that the motions which it is capable of performing will be explained on mechanical principles; ſince a very ſlight examination of what has been hitherto attempted in this way, muſt convince every one, who is open to conviction, that all ſuch explanations are vain and fallacious.

The nervous ſyſtem, on which both ſenſation and motion ſeem immediately to depend, is ſo totally beyond the reach of anatomical inveſtigation, that it would be in vain to think of applying mechanical reaſoning to that part of the human fabric; and as to the vaſcular ſyſtem, though many

many ingenious men have wrought with great aſſiduity in meaſuring the diameters of veſſels, and calculating the forces of the heart and arteries, yet when we ſee them differ ſo very widely in their concluſions, we may eaſily be perſuaded that all their labour has been to little purpoſe.

If ſome phyſiologiſts have gone too far in the way of mechanical reaſoning, and have made man little more than a machine; others again, by referring every thing to the ſpiritual part, ſeem to make no account of thoſe changes which happen in the animal motions, independent of the mind.

But here it falls out, as it does in moſt other diſputes, they err in carrying things to the extreme; for though it be impoſſible to comprehend the eſſence, or intimate nature of that immaterial, intelligent, and immortal principle which is within us, and which we expreſs by the word Soul; or to know in what manner it either acts, or is acted upon; yet there can be no doubt that the ſoul and the body reciprocally influence each other; and that the animal motions are equally capable of being changed, in conſequence of things which cannot poſſibly affect us in any other way than through the mind, as well as by things which are immediately applied to the corporeal part.

Moſt of the various diſeaſes to which the human body is liable, ariſe from changes which happen in conſequence of things that act immediately upon the corporeal frame; and hence the power of phyſic, ſince, by means of this art,

we

we can often change the ſtate of the corporeal frame, and, of courſe, regulate the diſorderly motions to which it is incident.

The art of phyſic produces its effects, partly by means of what the phyſiologiſts term vires inanimatæ, and partly through a peculiar property, called irritability, * which is inherent in the motory fibres of animals.

In the term vires inanimatæ are included all thoſe powers which produce coheſion in the ſolids, or raiſe the different kinds of inteſtine motion among the inſenſible particles of the fluids.

Of the intimate nature and eſſence of theſe powers, philoſophers know as little as they do of that of the ſoul; they are only convinced that ſuch powers do exiſt; that they are inherent in different kinds of matter, and that they can often be reſtrained or excited by human art.

In general, theſe powers are termed elective attraction, and repulſion; becauſe the particles ſeem as if they were endowed with the power of chooſing which kinds they will unite with, or fly off from.

With reſpect to irritability, we can ſay no more than that it is a property beſtowed on the motory fibres of animals, and that there is no ſuch thing obſerved in vegetable life; unleſs the property beſtowed on ſenſitive plants be allowed to approach

* As irritability neceſſarily implies mobility of the animal fibres, this does not ſeem to require being conſidered as a diſtinct property.

proach to that of irritability; eſpecially of that curious one, but lately come to the knowledge of botaniſts, the Venus's flytrap, or Dionæa muſcipula.

In conſequence of this property, the muſcular fibres, and thoſe which form the coats of all the different ſpecies of veſſels, canals and receptacles, are ſeen to move, as it were, ſpontaneouſly, alternately contracting and relaxing themſelves, even when cut out and detached from the body; and may be reſtrained or excited to motion, by the application of various ſubſtances.

This hath been proved by a multitude of experiments, publiſhed by different authors, which ſhew that the general circulation of the fluids in the vaſcular ſyſtem, chiefly depends on irritability; as alſo the different excretions, and the periſtaltic motion of the whole alimentary canal.

This property is likewiſe to be held as a requiſite foundation of the power of voluntary motion; for if we may be allowed to make a compariſon, the ſoul would be no more capable of moving any particular muſcle, or ſet of muſcles, if their fibres in general had not the property of irritability, than a muſician would be capable of bringing muſic out of a violin, if its ſtrings were not endowed with the property of elaſticity.

And if we are permitted to carry on the alluſion, the motions and actions of living animals may be likened to muſical ſounds; being all of them the joint reſult of inſtruments conſtructed in a particular way, and formed of materials endowed with certain

certain intrinſic properties, and of extrinſic powers, acting on theſe inſtruments; for we ſhould look on the ſoul as equally diſtinct from the corporeal frame, and from the properties inherent in the materials which compoſe the body, as the hand of a muſician is from the inſtrument he plays on.

As the perfection of muſical melody depends on the particular mechaniſm of the inſtrument and actual ſtate of the materials which compoſe it, (with reſpect to the properties of elaſticity, &c.) and on the dexterity of the muſician, conjoined; ſo the perfection of animal action depends on the corporeal ſtructure, the actual ſtate of irritability and vires inanimatæ, and on the peculiar powers of the ſoul conjoined.

If the ſtructure of a muſical inſtrument be incomplete, or injured, or if the materials which compoſe it be deficient, or diſordered with reſpect to intrinſic properties, then the muſic will deviate from, or fall ſhort of the pleaſing effect, notwithſtanding the muſician be ſuppoſed to exert all his dexterity; and in like manner, if the ſtructure of an animal body be incomplete, or if the materials which compoſe it be diſordered as to intrinſic properties, the actions will be irregular and defective, notwithſtanding the ſoul ſhould exert all its own peculiar powers.

It is owing then to the conjunct operation of the intelligent principle, vires inanimatæ, and irritability, that all the variety of motions and actions are carried on and performed by the living body.

By

By the word Nature, which is ſo very often made uſe of by medical writers, we are to underſtand the united force of all the different powers, and accordingly ſay, that nature conducts the animal œconomy, preſerves the body in health, and often frees it from diſeaſe.

CHAP. IV.

Motions carried on in the Vaſcular, Nervous, and Cellular Syſtems.

HAVING pointed out the different powers which, being united, animate the body, we ſhall now proceed to ſhew the motions and actions produced by their conjunct operation.

MOTIONS of the VASCULAR SYSTEM. —In the vaſcular ſyſtem the motions are ſufficiently evident, and capable of demonſtration; but in the nervous ſyſtem we have nothing to reaſon from but analogy, and the obſervation of effects.

The heart, as it is the center, ſo is it alſo, ſeemingly, the firſt mover of the vaſcular ſyſtem.

The heart is poſſeſſed of an higher degree of irritability than any other muſcle in the whole body; its motions conſiſt of alternate contractions and dilatations termed ſyſtole and diaſtole: by the ſyſtole the blood is expelled from the ventricles, which, during the diaſtole, had been received into them from the auricles and venous ſinuſes. But we are to obſerve, that, beſides theſe, there is

is a ſubſultory motion, when the apex of the heart leaps up, and ſtrikes againſt the ribs, ſo as plainly to be felt when the hand is applied to the left-ſide of the cheſt.

This ſubſultory motion is ſynchronous with the ſyſtole, and unleſs the ſtrength be nearly exhauſted, is conſtantly performed; but when the powers of life are brought very low, then it is ſcarcely perceivable, and there is nothing but the ſyſtaltic motion, which is ſufficient to empty the ventricles, and carry on life for ſome time.

The ſubſultory motion, according to a late writer, * is communicated to the whole arterial ſyſtem,

* There is a paper in the Memoirs of the Royal Academy of Sciences at Paris for the year 1765, intitled, "Recherches "ſur la Cauſe de la Pulſation des Artères," by M. de Lamure, wherein the author, after reciting the different opinions of ancient and modern phyſiologiſts, reſpecting the cauſe of the pulſation of the arteries, proceeds to ſhew, that this phenomenon does not depend, as is generally taught and believed, on the mere dilatation of the arteries, from the ſudden increaſe of lateral preſſure againſt their yielding coats, by the ſucceſſive columns of blood which are forced into them; but that there is a diſplacing, or loco-motion of the whole canal, analogous to the ſubſultory motion of the heart.

He admits that the arteries are dilated every time the heart contracts; but proves that this dilatation does not cauſe that ſmart ſtroke or beating which conſtitutes the pulſe, and that the increaſe of diameter is ſo ſmall, that it can neither be ſeen nor felt except in the larger veſſels; whereas the pulſation of even ſuch ſmall arteries as thoſe which run on the coats of the inteſtines may be both ſeen and felt, and conſequently their beating is owing to a vibration of the whole canal, and not to ſimple dilatation or increaſe of diameter.

The

ſyſtem, and is the chief cauſe of the pulſation in the arteries, which correſponds ſo exactly with the beating of the heart; for when the heart acts with ſtrength, the beat of the artery is ſtrong, and vice verſa; hence the utility of examining the pulſe.

When mechanical theories were much in faſhion among phyſiologiſts, many ingenious men employed themſelves in forming eſtimates of the ſtrength of the heart, and of the weight which it might be ſuppoſed able to counterbalance during the inſtant of its contraction.

But when we ſee the prodigious difference that there is between their ſeveral concluſions, we muſt immediately be convinced of the inſufficiency of all their calculations.

Borelli made it out clearly, as he thought, that the force of the heart was equal to 180,000 pounds weight, while Dr. Keill's calculation reduces the power of the left ventricle to five ounces.

Dr. Jurin ſettled the whole at fifteen pounds four ounces; Tabor makes it one hundred and fifty

The reaſoning and experiments brought to diſprove the commonly-received opinion are ſufficiently ſatisfactory; but when M. de Lamure attempts to explain the way in which the loco-motion of the arteries is performed, he rather falls ſhort. His notion, however, may nevertheleſs be founded in truth, ſince the ſame difficulty remains with reſpect to the ſubſultory motion of the heart: no perſon can doubt that the heart leaps up, and ſtrikes againſt the ribs; yet, where is the phyſiologiſt who can account for its ſo doing?

Such readers as have not an opportunity of conſulting the Memoirs at large, will find an extract from M. de Lamure's Eſſay in the Monthly Review, vol. xli. p. 518.

fifty pounds; and Dr. Hales fixed it at about fifty-one.

The like diverſity occurs when we examine the calculations concerning the velocity of the blood or its quantity, ſo that there ſeems but little probability of ever ſeeing theſe matters adjuſted by weight and meaſure.

That extreme degree of irritability which is peculiar to the heart, makes it capable of renewing its motions, even after it has ſeemed to ceaſe from action: and this circumſtance points out the rational method of procedure when we endeavour to revive perſons drowned or ſtrangled; for the thing to be attempted is, to put the blood, which is ſtagnating in the auricles and venous ſinuſes, into motion, ſo that being propelled into the ventricles, it may irritate the heart, and excite it to contraction anew.

And alſo, from this extreme irritability of the heart, may be deduced the frequency of fevers, beyond every other ſpecies of diſeaſe; ſince every thing ſtimulant, that chances to be generated, or to gain admittance into the blood, can hardly fail of exciting the heart and arterial ſyſtem to more frequent action.

The intervals between the contractions, as well as the degrees of force exerted by the heart, are different, according to the actual ſtate and diſpoſition either of the mind or of the corporeal frame.

When we are agitated by the joyful or angry paſſions, the motions of the heart are quick and ſtrong;

ſtrong; when depreſſed with grief or fear, they are ſlow and weak, and ſo on with reſpect to the other paſſions, each of which has its peculiar power over the motions of the vaſcular ſyſtem.

The leſs remote from infancy, the more frequent are the motions of the heart; the farther we advance into life, the more ſlowly are theſe performed.

Thus the pulſe of an infant of ſix months ſhall beat a hundred and ten times in a minute, while that of a man of fifty ſhall not give more than ſixty-five or ſeventy ſtrokes in the ſame ſpace of time.

Women alſo have the pulſe more frequent, and more eaſily diſturbed, cæteris paribus, than men. Hence in practice, when we come to form concluſions with reſpect to the motions of the heart, we are always to conſider the different circumſtances of age, ſex, and conſtitution; for there are many people who have the pulſe remarkably frequent, or remarkably ſlow, and yet enjoy a reaſonable portion of health.

The contractile power of the arteries depends on two circumſtances; firſt, the exertion of the muſcular fibres of their coats, which are found from experiment to be as irritable as the fibres which compoſe the heart; and, ſecondly, the elaſtic nature of a peculiar ſubſtance, which conſtitutes part of the arterial tunics: this united power enables the coats of the arteries to reſtore themſelves the inſtant that the action of the heart abates,

abates, and thus they force on the blood toward the circumference of the body.

Although the motion of the blood throughout the arteries depends, in great meaſure, on the power of the heart exerted at the center, yet it does not entirely depend on this power; for we may often obſerve, that the velocity of the blood ſhall be increaſed in particular ſets of blood-veſſels, at a diſtance from the heart; ſometimes in conſequence of various paſſions, and ſometimes from the application of things which have an irritating quality: on this laſt circumſtance, as will be explained in the proper place, depends part of the theory of inflammations.

There is alſo another circumſtance, which will ſerve to illuſtrate the ſame theory, and that is, what Baron Haller terms vis derivationis; in conſequence of which, if the power of reſiſtance in the coats of any blood-veſſel, whether vein or artery, be leſſened or taken away, whether it be by opening, rupture, or otherwiſe, the current of blood is always found to preſs on toward that non-reſiſting part.

The power of motion, which is peculiar to the ſmaller blood-veſſels, and which appears to act in aid of the force of the heart, for the purpoſe of carrying on the circulation in ſuch parts of the vaſcular ſyſtem as are too remote from the center, is termed the oſcillatory motion.

This oſcillatory motion is alſo ſuppoſed to have place in the various organs of ſecretion, and to carry on the circulation in the ſecretory and excretory veſſels;

veſſels; but theſe veſſels are ſo extremely minute, and ſo differently diſpoſed and conſtructed in the different glandular parts, that it is impoſſible to eſtimate the preciſe rate or degree of motion in any particular organ. It is evident that there is great diverſity with reſpect to theſe rates of motion, becauſe we ſee ſome of the ſecretions very quickly performed, while others are remarkably ſlow: it is likewiſe evident, that the motions in all the different ſpecies of ſecretory and excretory veſſels, like thoſe in the circulatory veſſels, are as much under the influence of the mind, as they are liable to be changed by things which act immediately on the machine, or corporeal part.

Thus, in conſequence of different paſſions, or from the application of different ſubſtances, we may every day obſerve the various ſecretions to be either accelerated or retarded.

Though all the different humours which are ſeparated, or ſtrained off from the blood, have each their peculiar apparatus; yet when there comes to be a ſtoppage or obſtruction, with reſpect to the ſecretion of any particular fluid, there enſues, for the moſt part, an evident increaſe of ſome other, in order to preſerve a balance.

Thus we ſee, that in three parts of the vaſcular ſyſtem, namely, the circulatory, ſecretory, and excretory veſſels, the motions are either originally derived from, or greatly aided by the force of the heart; but in the abſorbents, the motion of the contained fluids muſt depend entirely on the power of the veſſels, except the aſſiſtance which is afforded

forded from lateral preſſure of the adjoining muſcles and arteries.

Both lacteals and valvular lymphatics are found, by experiments made on living animals, to be extremely irritable; and hence we may preſume, that the power of propelling their contained fluids depends on their irritability: but it does not appear that the abſorbents are ſo remarkably liable to be affected by the mere power of the mind, as any of the other three kinds of veſſels which make up the vaſcular ſyſtem.

MOTIONS of the NERVOUS SYSTEM.—From the experiments of compreſſing or dividing the nervous chords in living animals, it is ſufficiently plain that there is a diſtribution or tranſmiſſion of ſome ſubtile fluid along theſe filaments which derives from the brain, and is at leaſt one undoubted and requiſite medium of ſenſation and voluntary motion, as well as what gives ſtrength to the living body.

But (as hath been already mentioned) whether this fluid be contained in minute tubuli, or whether it be conducted along ſolid filaments, the phyſiologiſts are totally ignorant; neither do they pretend to know how, or at what rate, the nervous fluid moves, or is diſtributed.

It is preſumed, indeed, that the nervous ſyſtem, during life, is in a ſtate of inceſſant vibration; not a vibration ſuch as is peculiar to elaſtic chords, to which the nervous chords bear not the leaſt reſemblance, but the vibration of an elaſtic fluid; however, this, like every other theory concerning the nerves,

nerves, reſts only on conjecture: but as there is nothing abſurd in ſuch a conjecture, and as it will at leaſt enable us to ſpeak intelligibly when we come to treat of the diſorders of the nervous ſyſtem, we ſhall aſſume the liberty of ſaying that there is a vibration of this ſort; and that in conſequence thereof, the organs of ſenſe and inſtruments of motion become proper ſubjects for the ſoul to exert its powers on.

If this vibration and perpetual diſtribution of the nervous fluid be admitted, then it is reaſonable to ſay, that in the natural and healthy ſtate, the motions of the nervous ſyſtem are equable, moderate, and free; in like manner, as we know from the pulſe, that, in perſons who enjoy perfect health, the motions of the vaſcular ſyſtem are equable, moderate, and free.

Baglivi and Hoffman, with their followers, ſuppoſe the dura mater to be the firſt mover of the nervous, as the heart is of the vaſcular ſyſtem; and they aſcribe to this membrane a power of alternate contraction and relaxation, which they preſume propels the nervous fluid, in like manner as the heart forces on the general maſs of blood.

But it ſhould ſeem that a very ſlight inſpection of this membrane, which has nothing muſcular in its texture, and which is in ſo many places attached firmly to the inſide of the ſcull, might convince any perſon that the dura mater cannot poſſibly exert ſuch force: there is indeed a twofold riſing and ſubſiding of the whole ſubſtance of the brain, which is obſervable when part of the ſcull is removed,

and the dura mater looſened from the cranium; for in theſe circumſtances we ſhall ſee the brain riſe every time that the heart is in its ſyſtole, and ſubſide when in the diaſtole; and alſo, when the animal forces out its breath the brain will be obſerved to riſe, but ſubſide during the time of inſpiration: hence the danger that may ariſe from violent coughing, or ſneezing, in perſons who have undergone the operation of the trepan.

There is a general communication or conſent, throughout the whole nervous ſyſtem, in conſequence of which we may often obſerve that motion and ſenſation ſhall be excited in parts at a diſtance, and ſeemingly unconnected with the nerves, where the impreſſion is actually made: thus, a ſtroke on the head ſhall diſorder the ſtomach, affect its motion, and occaſion vomiting; while, on the other hand, a load of offenſive matter in the ſtomach ſhall excite a ſevere pain in the head.

As to the manner in which the various ſympathies are brought about, phyſiologiſts are as little qualified to explain it, as they are to inform us concerning the intimate ſtructure of the nerves, the nature of the nervous fluid, or the rate of its motion.

When we come to inquire into the nature of particular diſeaſes, the moſt remarkable ſympathies, as they have been obſerved by experienced authors, ſhall be pointed out; as a knowledge of theſe connections is ſometimes of ſervice in directing the application of remedies; not in explaining the cauſes of diſeaſes; for if it be affirmed, for inſtance,

ſtance, that a pain in the head is occaſioned by its ſympathy with the ſtomach, and it be then aſked, what is ſympathy? we muſt anſwer, that ſympathy is a fellow-feeling, or an affection of one part of the living body, in conſequence of the affection of ſome other part; and thus it comes out, that the head is affected, becauſe the ſtomach is affected; and this is all the ſatisfaction that can be afforded by ſuch a ſcheme of reaſoning.

MOTIONS in the CELLULAR SYSTEM. —As the ſolids which conſtitute the cellular ſyſtem ſeem perfectly inert, and devoid of all power of ſpontaneous motion, ſuch as the living ſolids are endowed with; whatever degrees of progreſſive motion the fluids in this part of the human fabric have, muſt ariſe from the abſorption of the valvular lymphatics, and from exudation, when the oil and lymph eſcape through pores, on different ſurfaces, in various parts of the body.

The attraction of gravitation has ſcarcely any power over the fluids in the vaſcular ſyſtem, which appear to move as freely againſt gravity as with it; neither has it any perceivable effect on the fluids contained in the cellular ſyſtem, while the body continues in full health and vigour.

But when the ſtrength fails, and the circulation becomes weak and languid, then the abſorbents begin to fail in their office, and the fluids of the cellular ſyſtem being left to accumulate, fall down, and ſettle in the lower extremities, and dependent parts of the body, whence ariſe the ſwelled legs in

aged people, and in perſons who are weakened by diſeaſes, bad diet, or profuſe evacuations.

All theſe motions, hitherto ſpoken of, refer to the progreſſive motion of the animal fluids, whereby they are carried from one ſet of veſſels or cavities into another; but beſide this, there is an inteſtine motion, analogous to thoſe termed fermentation, effervescence, and ebullition, which ſubſiſts among the inſenſible particles, and enables the fluids to form a great variety of different combinations.

This inteſtine motion is demonſtrable in the juices of living vegetables, and ſeems to be the thing that keeps up the circulation in them, where the parts containing have no power of ſpontaneous motion, like the irritability obſervable in animal fibres; and no doubt but ſimilar kinds of inteſtine motion contribute to keep up the circulation in the ſmaller veſſels of animals, which are too far removed from the heart, and ſerve as a ſtimulus to irritate the living ſolids. Thus, in an animal body, motion goes on in a circle, the living ſolids propel the fluids, while theſe again ſtimulate the veſſels that contain them.

CHAP. V.

Actions, voluntary, ſpontaneous, and mixed.

IN every ſpecies of animal, even the loweſt, there are three powers or faculties, which they poſſeſs in different

different degrees and proportions, according to the ſeveral ranks aſſigned them by the Creator.

The faculties of appetite or deſire; of knowing or diſtinguiſhing objects; and of moving.

Man being placed at the head of the creation, is endowed with powers which far excel what are beſtowed on any of the brute animals; his body is formed and faſhioned ſo, as on the whole to ſurpaſs even the moſt perfect of theſe; and his ſoul is made capable of exertions, vaſtly ſuperior to any thing that can be obſerved among the creatures over whom he exerciſes dominion. *

Hence philoſophers have diſtinguiſhed between the faculties that are of an inferior nature, and which man poſſeſſes in common with the brute creation, and thoſe of a ſuperior, which are peculiar, and give him the acknowledged pre-eminence and command.

To theſe diſtinctions they have affixed different appellations, but the deſign of the preſent work does not require that we ſhould enter into ſuch detail; neither does phyſiology demand any thing further than to conſider the ſeveral corporeal actions, which are diſtinguiſhed into voluntary, ſpontaneous, and mixed.

Voluntary

* How beautifully does our immortal Shakeſpeare expreſs this ſuperiority?—"What a piece of work is man! how noble in "reaſon! how infinite in faculty! in form and moving how "expreſs and admirable! in action how like an angel! in ap-"prehenſion how like a God!—the beauty of the world! the "paragon of animals!"

Voluntary actions are thoſe which are the reſult of reaſon and the will, and performed with different degrees of deliberation and conſciouſneſs.

Spontaneous are thoſe which flow from inſtinct and appetite, and over which reaſon and the will have no controul; theſe are produced without conſciouſneſs or deliberation.

Mixed actions are thoſe wherein it is difficult to ſay whether reaſon or inſtinct, appetite or the will, have the greateſt ſhare.

With reſpect to all the various actions, whether voluntary, ſpontaneous, or mixed, we are always to conſider, that their performance will be as much influenced by the actual ſtate and diſpoſition of the corporeal frame, as by the actual ſtate and diſpoſition of the ſoul, which is ſo cloſely and myſteriouſly connected with the bodily organs; for the three faculties of deſiring, knowing, and moving, which are the ſprings of all the various animal actions, are as liable to be affected by things which are applied to the body, as by the influence of the mind.

To give one very familiar inſtance with reſpect to the faculty of deſiring, let a perſon who is extremely hungry, but not accuſtomed to the uſe of tobacco, put a leaf of this plant into his mouth, and in a few minutes he will find his appetite ceaſe; and inſtead of deſire for food, he will be affected with loathing, or perhaps vomiting.

This change in the appetite muſt ariſe from changes made in the corporeal frame, though it may be impoſſible to ſpecify what theſe are.

Again,

Again, let us ſuppoſe this hungry perſon not to have taſted any thing that could excite ſickneſs, but that juſt as he is about to ſit down to dinner he is informed of the death of ſome dear friend; then inſtantly the appetite of hunger will forſake him, and he will think no more of eating until the tumult raiſed in his mind by ſuch unexpected news ſhall ſubſide.

Here then, the change with reſpect to appetite muſt ariſe from changes wrought in the mind, and transferred from it to the body.

But ſuch is the power of cuſtom, that if perſons perſiſt in the uſe of tobacco, however nauſeous it may be at firſt, yet, in a little while, they ceaſe to be ſenſible of any change or diſturbance; and we may alſo ſafely affirm, that if it were poſſible every day ſhould bring us the account of ſome diſtreſſing misfortune, or of ſome joyful event; we ſhould in no very long ſpace of time ceaſe to feel any ſenſible emotion from either.

Conſtant repetition renders us inſenſible of many of the actions we perform, and in time makes even thoſe which might be deemed voluntary, ceaſe to be under controul of the will.

And this ſeems to be one principal reaſon why the action of reſpiration, while carried on with freedom and equability, is performed without conſciouſneſs.

The motion of the heart indeed is abſolutely ſpontaneous, and the will has no power to ſtop or controul it: but the muſcles ſubſervient to reſpiration are ſome of them concerned in actions that are

are purely voluntary, and accuſtomed to obey the will; hence, this action is, in ſome degree, liable to be controuled, though it is not in our power thus entirely to ſtop it, becauſe of the extreme anguiſh which ſuch interruption would occaſion; for it is the property of that ſentient and intelligent principle, which is joined to the corporeal frame, to feel diſtreſs, when any of the important motions are diſordered or ſuſpended.

Health, as defined in the very firſt paragraph of this book, will continue perfect ſo long as there is an equable moderate and free circulation and diſtribution of the ſeveral animal fluids throughout every part of the vaſcular and nervous ſyſtems.

For, if the general maſs of blood, iſſuing from the heart, flows through all the various ramifications of arteries, in an uninterrupted eaſy ſtream; if the ſeveral ſecretory veſſels perform their offices, and ſeparate the various humours, while the remaining blood is returned by the veins from the circumference, in the ſame moderate tenour that it parted from the center; if the excretory veſſels carry off their proper humours, depoſite thoſe in receptacles that ought to be ſo depoſited, while ſuch as are excrementitious are diſcharged; and if the two kinds of abſorbents take up and convey the fluids proper to them, without ſtoppage or irregularity, then all will be well on the part of the vaſcular ſyſtem.

And if the nerves be properly imbued with their peculiar fluid, whatever its nature may be, and this be diſtributed with freedom, moderation

and

and equability, to every minute filament, then all will be well with reſpect to the nervous ſyſtem.

Thus the canals being properly filled, and the nerves duly ſupplied, the corporeal organs in general will be kept in that ſtate, form and diſpoſition, which render them fit inſtruments for the ſentient and intelligent principle, which actuates the whole, and enables the body to perform and exerciſe, with eaſe, pleaſure and proportional ſtrength, all the various actions and functions.

A METHO-

A

METHODICAL INTRODUCTION

TO THE

THEORY

OF THE

ART OF MEDICINE.

BOOK II.

PATHOLOGY; OR, ANALYSIS OF DISEASES.

CHAP. I.

General View of the Symptoms or Component Parts of Diſeaſes.

HAVING taken this ſummary view of the animal œconomy, as carried on during the time of perfect health, we now proceed to the pathology, or that part of the medical ſyſtem which treats of the morbid ſtate in general.

If we attend to the nature of diſeaſes, we ſhall find that they always conſiſt of different kinds of diſtreſs or inability; for let us examine any perſon who is ill, it matters not of what diſtemper, and we ſhall conſtantly perceive that there is more than one complaint.

Theſe

Theſe complaints, when regarded ſingly, are all termed in the medical language Symptoms.

Hence we may underſtand what authors mean, when they tell us that a diſeaſe is an aſſemblage or combination of ſymptoms.

Symptoms are either general or local; they are peculiar to one ſex, or to the ſtate of infancy.

General ſymptoms are thoſe inabilities and different kinds of painful or uneaſy ſenſation, which affect the whole frame, and diſturb the general regularity of the animal œconomy.

Local ſymptoms are ſuch diſorders as being reſtrained to particular organs, or parts of the body, do not interrupt or diſturb the general œconomy.

Sexual ſymptoms are thoſe diſtreſſing ſenſations, inabilities, and local diſorders, which depend on the different formation of the organs diſtinctive of the ſexes, and on the particular circumſtances peculiarly annexed to each.

Infantile ſymptoms are complaints and morbid appearances which are only met with, or obſerved in infants newly born, and within the period of dentition.

As the analytic method, which begins by reſolving things, as far as may be, into their conſtituent parts, and then examining theſe in the ſeparate ſtate, is the way that has led to the moſt important diſcoveries which have been made in natural philoſophy, let us adopt it, in order, if poſſible, to find out the true nature of diſeaſes; and

and ſince ſymptoms are the component parts of diſeaſes, let us firſt attempt to inveſtigate them.

We ſhall readily aſcertain the number of general ſymptoms, by firſt obſerving the ſeveral conditions which reſult from the general regularity of the animal œconomy, and then by conſidering the deviations from, or the oppoſites to theſe conditions.

While the animal œconomy in general is carried on with regularity;

1. The degree of animal heat is ſuch, that it neither falls below nor riſes above what gives a pleaſant and agreeable ſenſation.

2. The appetites reliſh their natural objects, and return in moderation at the proper ſeaſons and intervals.

3. There is no pain or ſoreneſs.

4. No itching.

5. The ſleep is natural and refreſhing.

6. There is no ſenſe of ſtraitneſs or oppreſſion about the præcordia.

7. The breathing is perfectly free.

8. The voluntary motions depending on the exertion of the muſcles can be performed agreeably to the will, with eaſe, readineſs, and due degrees of ſtrength.

9. The feeling is natural, and the ſeveral organs of external ſenſe receive, and tranſmit the different

different impreſſions to which they are peculiarly adapted, in the proper and moderate degree.

10. And, laſtly, the organs of internal ſenſe are all in that natural ſtate, which enables the mind to perceive clearly, and judge truly concerning the impreſſions which are made, or of the ideas which ariſe in conſequence of the powers of memory and imagination.

Now let us examine what are the oppoſites to theſe ten conditions.

In the firſt place, the extremes with reſpect to a moderate and pleaſant degree of animal heat, muſt be the uneaſy ſenſation of exceſſive heat, or of exceſſive cold; hence ariſe two ſpecies of ſimple morbid affection, conſtituting two general ſymptoms.

The deviations from, or the oppoſites to a natural appetite, muſt be a diſreliſh or loathing of the proper objects; whence ariſes a third general ſymptom, conſiſting in that uneaſy ſenſation, which we uſually expreſs by the word ſickneſs; or when the appetites become ſo unnaturally keen, as to create diſtreſs from exceſs of deſire; whence come violent thirſt, and what the writers term fames canina, ſatyriaſis, and furor uterinus: the three laſt mentioned complaints occur ſo very rarely, that they ſhall not be noticed at preſent; but diſtreſſing thirſt is ſo frequently met with in diſeaſes, that it ſhall be conſidered as the fourth of the general ſymptoms.

Pain, and itching, are oppoſites to the third and fourth conditions; and,

Their

Their natural attendant, or conſequence, reſtleſſneſs or inability to ſleep; and an extraordinary or unnatural and morbid propenſity to ſleep, are oppoſites to the fifth condition of general health.

An oppreſſion and ſenſe of ſtraitneſs about the præcordia, termed anxiety by the writers, is the oppoſite to the ſixth; and,

Difficulty of breathing is ſo to the ſeventh condition.

Weakneſs and relaxation of the muſcular fibres, ſo as not to leave ſtrength ſufficient properly to ſupport the body, and obey the dictates of the will; and its oppoſite, ſpaſm or convulſion, when the muſcles act contrary to the will, and ſometimes exert unuſual degrees of ſtrength; theſe are deviations from, and oppoſites to the eighth condition; and, being added to the foregoing, make an eleventh and a twelfth general ſymptom.

Inſenſibility, with reſpect to the application or impreſſion of external objects; and its oppoſite affection, a too high degree of ſenſibility, or unnatural proneneſs to irritation, conſtitute a thirteenth and a fourteenth general ſymptom, as being deviations from, and oppoſites to the ninth condition, which requires the organs of external ſenſe to be ſuſceptible of feeling, and capable of tranſmitting the impreſſions peculiar to them in the natural and moderate degree.

To which we muſt add, as the fifteenth and laſt, that general diſturbance and diſorder of the internal ſenſes, called delirium, when the faculties of

of the mind cannot be properly exercised, but the several powers of memory, imagination and judgment, are weakened, confused and perverted.

Each of these fifteen species of morbid distress or affection, may be considered in the abstract, as capable of existing, one independent of another; but whenever they do exist, they affect the whole frame; hence we have called them general symptoms, in order to distinguish them from those affections which are only local, and spring from the disorder of particular parts of the body. For if not one of these general symptoms be present in any particular person, that person must be allowed to be in health, as to the animal œconomy in general, though he may, notwithstanding, labour under some disorder of a particular organ. As for example, the lungs may be disturbed in their action by a cough, raised by the irritation of somewhat either about the larynx, or lower down in the trachea; or the little ducts and orifices, which are naturally destined to ouze out lymph and mucus, to lubricate the intestines, may be irritated so as to pour out an unusual quantity of these humours, and thus give rise to a looseness: but this cough, unless it be accompanied with other symptoms, such as pain, difficulty of breathing, restlessness, or loss of appetite, will not deserve the name of disease, and the person affected will scarcely apply for medical assistance; neither would the slight diarrhœa or looseness be reckoned a disease, unless it were attended with some one or more of the fifteen general symptoms, since we know for certain that so long as every

every one of these fifteen complaints can be kept off, so long will the body remain free from any important suffering.

As certain symptoms, both general and local, are usually observed to combine, and accompany each other (as flowing from similar changes in the state of the animal motions); these assemblages are distinguished by different names, such as fever, pleurisy, dysentery, thus making up the entire catalogue of diseases.

The knowing how to distinguish these combinations, and the sources from whence they spring, is the true foundation of rational practice; for in our attempts to relieve sick people, we seldom regard particular symptoms, or any single species of the distress, but rather, having found out the source of the whole assemblage, strike at the root, and endeavour to rectify what is amiss with respect to the animal motions.

But we shall never attain this knowledge, unless we first consider the nature and consequences of each of the general symptoms apart, and find out what it is that gives rise to them; for having considered these singly, and investigated their causes, then, by comparing things afterwards, we shall readily see how many of these symptoms spring from one source, and consequently come to understand how it happens that such and such are, as it were, inseparable, or constantly run together in the same assemblage.

A Table of the fifteen general Symptoms, oppoſed to the ten Conditions of perfect Health, is here ſubjoined, in order to give a Synoptical of both the healthy and morbid State.

In the healthy ſtate.	In the morbid ſtate.
I. The degree of animal heat is moderate.	I. There is, either exceſſive heat, or II. The ſenſation of exceſſive cold.
II. The appetites reliſh their natural objects, and return in moderation at proper ſeaſons and intervals.	III. Sickneſs. IV. Diſtreſſing thirſt.
III. No pain is felt.	V. Pain.
IV. No itching.	VI. Itching.
V. The ſleep is natural and refreſhing.	VII. Inability to ſleep; or, VIII. Somnolency.
VI. There is no ſtraitneſs or oppreſſion about the præcordia.	IX. Oppreſſion or ſtraitneſs, termed anxiety.
VII. The breathing is free.	X. Difficulty of breathing.
VIII. The voluntary motions are performed agreeably to the will, with eaſe, readineſs, and proportionate degrees of ſtrength.	XI. Want of ſtrength; or, XII. Spaſm.
IX. The organs of external ſenſe, receive and tranſmit their ſeveral different impreſſions in a proper and moderate degree; and,	XIII. Want of ſenſibility; or, XIV. Superſenſation.
X. The organs of internal ſenſe enable the mind to perceive clearly, and judge truly of the impreſſions which are made, and of the ideas which ariſe from memory and imagination.	XV. Delirium.

CHAP.

CHAP. II.

Remote or poſſible Cauſes of Diſeaſes.

THAT part of pathology, which is employed in exploring the cauſes of diſeaſes, is termed ætiology.

In explaining the ætiology, we muſt always be careful to diſtinguiſh accurately between thoſe changes in the ſtate of the corporeal frame, which at all times, and in all ſubjects, produce ſome one ſpecies of morbid affection, and thoſe things which only have the power of creating diſorder, when the concurrent diſpoſition of body is preſent.

The practice of inoculating for the ſmall-pox will here ſerve as an illuſtration. In the ſubject who is inoculated, a ſmall quantity of purulent matter, which experience has ſhewn to be infectious, is introduced through a ſlight puncture of the ſkin, ſo as to mix with the animal fluids: if the body be properly diſpoſed, the conſequence of this introduction will be, a certain number of ſymptoms and appearances, which combined together, conſtitute a diſeaſe termed the ſmall-pox. Firſt, there will be an oppreſſion about the præcordia, accompanied with ſickneſs, or perhaps vomiting, pain in the back, and an uneaſy ſenſation of cold; in a few hours this cold will give place to extraordinary heat, attended with thirſt and reſtleſſneſs; and in the courſe of two or three days, an eruption of red pimples will appear, which in three days more will

begin to ſwell, inflame, grow painful, and laſtly fill with yellow matter: but all this will only happen when the body is properly diſpoſed to co-operate with the infection; for if it be not ſo diſpoſed, either from the perſon's having had the ſmall-pox before, or from ſome other reaſon which is not within the ſphere of our inveſtigation; then no change will enſue, but health will remain in the ſame ſtate as before inoculation.

Thus we ſee, that this infectious matter, which without conſidering one might be apt to conclude was the immediate cauſe of the diſtreſs, is only a remote, contingent, or poſſible cauſe, that either may, or may not act, juſt as the body happens to be diſpoſed; and that the immediate, or actual cauſes, are certain changes in the ſtate of the corporeal frame, which neceſſarily produce diſorder in regard to the motions of the animal fluids.

It is our buſineſs then, to find out what theſe changes are, which are thus invariably productive of the different ſpecies of morbid affection: but it is eaſy to underſtand, that neither the changes in the ſtate of the corporeal frame, which are held as the actual cauſes of diſeaſes, nor thoſe morbific diſpoſitions of body which muſt concur with the poſſible cauſes before any one ſymptom can be produced, are things that can be brought within the cognizance of external ſenſe; for who will explain what it is that diſpoſes the body at one time to be infected with the matter of the ſmall-pox, and at another to reſiſt this particular virus? or who can diſcern thoſe changes in the ſtate of the corporeal frame which are always followed by the different

ent ſymptoms lately mentioned? Theſe are matters that we can only reaſon about, but which we muſt not pretend to demonſtrate, or render incontrovertible, by evidence of the ſenſes; and hence it is, that there always has, and always will be a conſiderable variety of opinions among medical people with reſpect to the cauſes of diſeaſes; and yet it is of the higheſt importance to the rational ſtudy of phyſic, to gain as clear ideas of theſe matters as may be, otherwiſe our practice muſt be merely empirical.

What pathologiſts have treated of under the titles of morbi ſimpliciores, and morbi ſimpliciſſimi, whether they refer to the ſolids or to the fluids, have been rather improperly ſo termed, becauſe the word Morbus, ſtrictly ſpeaking, implies an aſſemblage of diſtreſſing ſenſations, or of inabilities; we are therefore not to conſider theſe morbi ſimpliciores as actual diſeaſes, but only hold them as poſſible cauſes, or as morbific diſpoſitions, that may concur in producing pain, ſickneſs, weakneſs, or ſome other ſpecies of morbid diſtreſs or affection.

We ſhall begin with the morbific diſpoſitions of the ſolid fibres, regarded ſimply as ſuch.

The different degrees of ſtrength in animal fibres, when theſe are conſidered as unconnected with that enlivening principle which enables them to exert the powers peculiar to living creatures, muſt conſiſt in the different degrees of coheſion among the conſtituent particles.

Of whatever nature this principle of coheſion may be, it is liable to change, being ſometimes deficient,

ficient, and ſometimes redundant; hence debility, ſoftneſs, and relaxation on the one hand, and ſtrength, hardneſs and rigidity on the other.

But when we take into conſideration the living ſolids or fibres endued with life, we ſhall find that the animating powers may be exerted, ſo as either to riſe above or ſink below the healthy ſtandard.

When we conſider what muſt follow from the exceſs or defect of the cementing principle in the ſolids, conſidered as inert, and alſo what effects muſt enſue from an exceſs or defect in the exertion of the powers wherewith theſe fibres are animated, we ſhall then underſtand the nature of the "morbi "vaſorum minimorum, ſeu ſolidorum continenti-"um," (as they are called by Boerhaave and Gaubius.)

For weakneſs, relaxation, and inſenſibility, combined together, will naturally tend to produce remiſſneſs of the animal motions, whence coldneſs, languor, and a defect of the abſorbent power in the lymphatic veins, together with a dilatation of the pores, and open orifices of the ſmalleſt arteries, allowing the contained fluids to tranſude, or fall aſide into the cellular interſtices, creating ſwellings, and accumulations of various humours, in different places; while, on the other hand, too great ſtrength and rigidity, with too much ſenſibility, will naturally tend to produce intenſeneſs in the animal motions; whence exceſſive heat, pain, and reſtleſſneſs.

Theſe are ſome of the peculiarities which conſtitute the different temperaments, as they have been called, and which the old phyſiologiſts referred ſolely to the fluids; naming them according to the ſuppoſed

ſuppoſed predominancy of one or other of the four capital humours, ſanguineous, phlegmatic, bilious, or melancholic, but which are now reſolved into the different degrees and combinations of ſtrength and ſenſibility.

(1.) Much ſtrength of veſſels, and much ſenſibility, conſtitute a temperament analogous to what the ancients underſtood by the ſanguineous. (2.) Little ſtrength, with much ſenſibility, forms the hyſteric temperament, and anſwers in ſome meaſure to their bilious. (3.) Great ſtrength and little ſenſibility coincides with the melancholic. While, (4.) Little ſenſibility joined to weak veſſels conſtitutes the phlegmatic temperament of the old writers.

Having thus pointed out the morbific diſpoſitions of the parts containing, we are next to conſider thoſe of the parts contained.

The animal fluids conſiſt of particles eſſentially different, which act on each other by attractive or repellent powers; hence they are capable of forming a variety of combinations.

There is much diverſity of opinion concerning morbific changes in the animal fluids, which have generally been held as the ſources of all diſeaſes; and many are the theories that have been formed from the days of the Galeniſts, when the four humours were believed to have exiſtence, down to thoſe wherein the chemiſts accounted for every thing from their principles of ſalt, ſulphur, and mercury; acid and alkali; and until the mechanical phyſiologiſts

ſiologiſts fancied that they ſaw cubes and ſpheres, darts and wedges, in the animal fluids.

But the miſchief of all ſuch theories is, that they influence practice, and are too apt to turn our attention ſolely to the correction or expulſion of ſome particular offenſive humour or matter, of which we form an imaginary notion; neglecting to obſerve the efforts of nature, or ſlighting that knowledge which is the reſult of experience.

The term Acrimony includes all thoſe morbific matters, which, being mixed with the blood, either deſtroy its healthy craſis, ſtimulate the living, or corrode the inert ſolids.

As the theory of theſe morbific combinations has always been held a neceſſary part of the pathology, we ſhall here give a ſhort ſketch of it, as laid down by Gaubius, who is one of the lateſt, and ſuppoſed to be the beſt writer on this branch; not that we look on his diſtinctions as of much uſe in practice; it being very ſeldom that we can fairly deduce diſeaſes from the kinds of acrimony which he has pointed out.

Gaubius makes five diviſions of acrimony; the acid, the pure alkaline, the putrefactive, the muriatic, and the ammoniacal; and he enumerates particularly the ſeveral ſpecies of diſtreſs that may ariſe, ſuppoſing theſe different acrimonies as actually ſubſiſting in the fluids.

1. The acid acrimony, by attracting and uniting with the aqueous, ſuppreſſing the inflammable, and diſſolving the earthy particles of the fluids, will cauſe paleneſs, coldneſs, and ſoftneſs of the ſolid parts,

parts, with languor and remiſſneſs in the vital motions; whence ſtagnation and corruption of the humours, producing puſtules, ulcerations, itching, and pain.

2. The alkaline acrimony, which alſo deſtroys the craſis of the blood, will melt down its earthy and oily particles, irritate the living ſolids, and corrode the ſides of the veſſels, thus creating ſpaſms, and producing extravaſation, and diſcharges of different humours, according to the nature of the canals, whoſe texture is thus deſtroyed or injured.

3. The putrid acrimony, (which is not to be confounded with the pure alkaline) when it takes place in the conſtitution, is the moſt deſtructive of all; it deſtroys the viſcidity of the blood, and renders it unfit for the purpoſes of life; weakens and irritates the living ſolids, and corrodes both them and the inert; hence a total perverſion and diſturbance of the whole œconomy of vital motions, neither conquerable by art or nature.

4. The muriatic acrimony, ariſing from the uſe of too much ſalt with our food, is ſaid to cauſe, particularly, itching, redneſs of the ſkin, puſtules and ulceration, waſting of the fleſh, and ſometimes ſtiffneſs of the joints, and inflexibility of the muſcular fibres.

5. Similar effects will ariſe from the ammoniacal acrimony, which is ſuppoſed to be the conſequence of a preternatural retention of the ſaline part of the fluids, from an obſtruction or ſtoppage of the natural diſcharges.

All

All this is perfectly syſtematical, and does very well to read; but when we come to look for theſe different kinds of acrimony in our patients, we ſhall not often be able either to find out or diſtinguiſh them.

We know indeed that the ſmall-pox, the meaſles, and the lues venerea, ariſe from ſome peculiar ſubtile matter, which we find by experience will always produce theſe diſeaſes, and no other ſpecies; but whoſe qualities we ſhall probably never be able to determine. Therefore, it will turn to moſt advantage, not to be over ſolicitous in attempting to inveſtigate their peculiar nature, but having once found out what the marks and ſigns are which ſhew the exiſtence of a particular ſpecies of morbific matter, adhere to them, and then have recourſe to the known methods of correcting or expelling it.

For example; a perſon comes with all the marks which the pathological writers tell us denote the predominancy of the acid acrimony; he is pale, languid, and broken out in a variety of puſtules.

Now, if we ſhould, without further inquiry, ſet about the cure of this perſon, by ordering alkaline ſalts, or abſorbent earths, or ſuch other things as we might imagine would conquer this offenſive acid, we ſhould perhaps preſcribe to very little purpoſe; for, upon cloſe examination, we may chance to find that the patient, inſtead of an acid acrimony, has his fluids corrupted by the venereal virus; we therefore ſhall think no more of the antacids,

antacids, but proceed to correct and expel the particular morbific matter which has the peculiar property of producing the lues venerea, by such methods as have been found by experience to answer that end.

Let us therefore content ourselves to denominate the morbific matter from the disease which it is known specifically to produce, and be under no concern whether we know or do not know what its other qualities are, provided we can tell when it is present, what effects will ensue, and what things will correct or expel it: the advantages of this method will best appear from an example.

One person complains of pains about the joints, with loss of appetite, languor, and uneasiness in the stomach; another complains of pains which chiefly affect the middle part of the bones, and rage with greatest violence in the night-season, being exasperated by the warmth of the bed; together with the other complaints already mentioned. Now, here we shall find, on weighing the observations that have been handed down to us, that one species of pain arises from an arthritic matter, and the other from the syphilitic; no man can tell what either the one or the other morbific matter is like, whether it tends to the alkaline or acid nature; but we know from experience, that if the one can be thrown upon the joints, so as to produce a sharp fit of pain, or if the other can be corrected by mercury, that then both patients will soon come to enjoy perfect health: therefore, instead of referring the causes of these diseases to the acid, the alkaline, or the muriatic acrimony, and

and ſearching for things to counteract and oppoſe theſe imaginary cauſes, we ſhall immediately preſcribe ſuch things to the firſt patient as have been found to aſſiſt nature in the effort of expelling the arthritic matter; and to the ſecond, ſuch as we know to be capable of correcting and ſubduing the venereal virus.

Theſe morbific matters which are found capable of producing, occaſionally, particular ſpecies of diſeaſes, are of two ſorts, native and adventitious; the firſt appear to be formed within the body, the ſecond are communicated from without; either by the tranſmiſſion of a ſubtile matter, or by actual contact with a diſeaſed ſubject.

To the firſt head belong thoſe kinds of morbific matter, which are capable of producing the gout, the rheumatiſm, the ſcurvy, the ſcrofula, and the cancer.

To the ſecond belong all thoſe amazingly ſubtile matters, uſually termed miaſmata, which are found capable of ſpreading through the atmoſphere, and communicating a variety of infectious fevers known by different names, the dyſentery, and the hooping cough; the ſaliva of mad animals, the venom of vipers, and other noxious creatures; the matter of the lues venerea, yaws, ſibbens, ſcabies, and ſome other cutaneous diſeaſes.

Every one of theſe different kinds of morbific matter, which have been enumerated, will, when generated in the body, or received from without, produce the ſpecies of diſeaſe peculiar to it, only with thoſe varieties that happen from the different circumſtances

circumſtances of age, ſex, and conſtitution, provided the body be, at the particular time, in a diſpoſition for being acted upon by the morbific matter; for ſuch is the order of nature, that the diſeaſes, which all theſe different kinds of acrimony are occaſionally capable of producing, require not only the preſence of the morbific matter, but alſo ſome certain concurrence and diſpoſition in the ſtate of the corporeal frame before the particular diſeaſe can be actually formed. We do not pretend to explain the nature of theſe concurrent diſpoſitions, but reſt contented with the certainty of the fact: thus, it is univerſally known, that the ſmall-pox, the meaſles, and the hooping-cough, ſcarcely ever ſeize the ſame perſon twice; but who is there that can explain the nature of the alterations which are made in the body, and leave it ſo diſpoſed, that the morbific matter ſhall not have the power of producing diſturbance in the animal œconomy a ſecond time? And thus it frequently happens, that two perſons of the ſame family ſhall be inoculated for the ſmall-pox at the ſame hour, and with all apparent circumſtances alike, and yet one ſhall take the infection, and the other eſcape it: the like may be obſerved with reſpect to other infectious diſeaſes; in regard to which, ſome people are now and then found ſo happy as to want the peculiar diſpoſition which is neceſſary to concur with the morbific matter before the diſeaſe can be produced.

Since theſe morbific matters ſeem to be eſſentially different, and to poſſeſs peculiar powers of producing changes in the living body, which, ſo far

far as the circumſtances of age, ſex, and conſtitution will allow, are invariable and uniform, it follows, that were we ſo happy as to find out things endowed with virtues to counteract the different ſpecies of morbific matter, we ſhould then obviate or correct the ill effects of each. But unfortunately for mankind, this has hitherto been done with regard only to a few; for, if we except the morbific matter in certain kinds of fever, the ſcorbutic virus, and that which is known to produce the lues venerea, and ſome other diſeaſes nearly allied to it, we cannot ſay that the art of phyſic is in poſſeſſion of any certain remedies; with reſpect to theſe diſeaſes, indeed, experience has furniſhed us with means that ſcarcely ever fail, if applied in time, and with tolerable care and attention.

But what has been done with regard to the diſeaſes juſt now mentioned, may, for any thing we can ſay to the contrary, be done in reſpect of more, and ought to encourage us in the hope, that in time ſomewhat may be ſtruck out that ſhall cure even the gout and cancer; for terrible as the virus of a cancer may be, it is not more ſo than the venereal was, until practitioners happily diſcovered the ſpecific powers of mercury. Guicciardini, the celebrated Italian hiſtorian, who was an eye-witneſs, relates, that the lues venerea, for ſeveral years after it firſt broke out in Europe, proved fatal to a multitude of both ſexes and all ages; many became ſo horribly diſfigured, that they remained uſeleſs, and ſubject to almoſt perpetual pains, and the beſt part of thoſe who ſeemed to be cured, ſoon relapſed into the ſame miſery.

If

If it had ſo happened then that a remedy had not been found out until this day, how many thouſands of people muſt have periſhed in a more ſhocking condition than by the moſt inveterate cancer? But to return.

If we ſuppoſe the morbific matter, be it of what nature ſoever, to be only ſeated in the cavities of the cellular ſyſtem, whoſe ſides are made up of inert fibres and lamellæ, and not at all mixed with the nervous fluid, nor with the blood and other humours contained in the vaſcular ſyſtem, we may in ſuch caſe conceive, that noxious matters may be preſent, and yet produce no ſenſible or apparent changes in regard to health. Thus, we know from the practice of inoculating the ſmall-pox, that the variolous matter will remain for eight or ten days in the body without ſhewing itſelf, and the ſaliva of a mad dog may be inſinuated through a wound of the ſkin, and yet many weeks, nay ſometimes months, elapſe before any ſymptoms of the hydrophobia ſhall appear.

Why the one kind of morbific matter ſhould ſhew itſelf ſo much ſooner than the other, is an affair for which it is impoſſible to aſſign any intelligible reaſon, any more than why the ſaliva of a mad animal ſhould bring on a hydrophobia, or the matter of the ſmall-pox throw a perſon into a fever, and cover him all over with little boils.

It is the ſame thing with reſpect to every other ſpecies of morbific matter; ſo long as they are confined to the cellular ſyſtem, they never raiſe any one of the fifteen general ſymptoms; and for the

the reaſons already laid down, if any particular kind of acrimonious or morbific matter can be ſeparated from the general maſs of fluids, and be thrown out of the circulation; that is, from the vaſcular into the cellular ſyſtem; the irritation which was occaſioned by its ſtimulus will ceaſe, and of courſe all the ſymptoms depending on that irritation.

This is the way that relief comes in many diſeaſes, from the various kinds of efflorescence and cutaneous eruption; for in all theſe caſes, the offenſive particles, by the efforts of nature, and ſome inexplicable proceſs with reſpect to the inteſtine motion of the fluids, are ſeparated from the maſs in circulation, and either forced out or ſuffered to eſcape through ruptured veſſels, or to tranſude through the pores which are in the coats of the arteries, and thus are depoſited in the cellular cavities, where they lie among inert ſolids, without raiſing further diſorder.

All theſe morbific matters which have hitherto been treated of are ſuppoſed to exiſt in the general maſs of fluids; but diſeaſes are often produced by vitiated humours and other matters retained or accumulated in the firſt paſſages.

The famous Hoffman ſeems to have been the firſt who conſidered, with much attention, this accumulation of noxious matters in the alimentary canal, and ſhewed it to be the ſource of many diſeaſes; he has traced the ſympathies which obtain between the ſtomach and different parts of the body, with great ſucceſs, and has been followed in his inquiry by the late celebrated Dr. Whytt.

From

From theſe obſervations it appears, that almoſt every variety of diſorder, with reſpect to the animal motions, may ariſe from the retention or accumulation of morbific matters in the alimentary canal, as well as from different ſpecies of acrimony in the fluids at large; but the great difference between the diſeaſes which depend on this ſympathy and thoſe which ariſe from faults in the fluids is, that theſe ſympathetic diſeaſes are more within the power of art, and much oftner cured, than the others, which are termed idiopathic.

The terms Cacochylia and Saburra are uſed to denote the general accumulation of offenſive matters in the alimentary canal, and they are diſtinguiſhed into five different kinds: 1. The acid ſaburra. 2. The bitter. 3. The inſipid. 4. The putrid. And, 5. The empyreumatic.

The general conſequences of the alimentary canal, and particularly the ſtomach's being ſo loaded, are loſs of appetite, nauſea, pain, weight and fulneſs of the ſtomach, pain of the head, languor and weakneſs: but the particular complaints which are apt to enſue from each ſpecies of ſaburra are as follow:

Firſt; the acid ſaburra will occaſionally produce ſour belchings, ſwelling, tenſion, heat and pain in the ſtomach, heavineſs and pain in the head, cough, hiccup, coſtiveneſs, and ſometimes looſeneſs and teneſmus.

The bitter ſaburra will be apt to cauſe immoderate thirſt; heat and pain in the ſtomach; vomit-

ing of yellow or greeniſh matter; and violent purging, with griping; and diſcharges of ſharp and acrid humour; the whole generally accompanied or followed by a yellowiſh tinge in the whites of the eyes, and all over the body.

The inſipid and tough phlegm, which conſtitutes the third ſpecies of ſaburra, produces clammineſs in the mouth, deſtroys the appetite, favours the generation of worms, gives riſe to abundance of flatulent matter; and when this is diſcharged upwards, the taſte and ſmell of the laſt thing that was ſwallowed will come up ſtrong, and but little changed, while a ſenſe of weight will generally be felt about the region of the ſtomach.

A putrid kind of taſte in the mouth, with flatulent eructations of the ſame flavour, weight at the ſtomach, oppreſſion about the præcordia, weakneſs, ſickneſs, vomitings of fetid matter, and purging of the ſame, will be apt to ſucceed an accumulation of the fourth ſpecies, or putrid ſaburra.

The rancid, or empyreumatic ſaburra, will be productive of belchings of ſharp oily matter, like fried oil or butter, of violent heat and pain in the ſtomach, with gripings, ſickneſs, oppreſſion, and naufea; and this ſpecies of ſaburra is eſteemed a pretty ſure ſign and forerunner of the gout.

Neglect of ſufficient bodily exerciſe, profuſe diſcharges of blood, or of any ſecreted humour; great attention of mind to a particular object; violent and long-continued paſſions; may all be conſidered as general ſources of cacochylia: but if we inquire

quire into the accumulation of the ſeveral ſpecies of ſaburra, we ſhall find things that particularly favour the production of one rather than of the other.

And firſt, the generation of acid ſaburra will be apt to take place, if the food be retained too long in the ſtomach, whether from a weakneſs in the muſcular fibres of its coats, or by the neglect of proper bodily exerciſe, on account of a particular buſineſs or profeſſion, or from mere inattention; for thus the mixture of food and digeſtive fluids, which naturally ought to run through a regular fermentatory proceſs, of a peculiar kind, may poſſibly ſtay in the ſtomach, or ſmaller inteſtines, until the firſt or ſweet ſtage of fermentation be paſſed through, and until the alimentary mixture ſhall get into the ſecond or ſour ſtage; and this will be ſtill more favoured by feeding on ſuch things as are already in a ſtate of acidity, or which are prone to run quickly into the ſour ſtage of fermentation, ſuch as milk, all the common fruits and farinaceous ſubſtances: hence it is eaſy to foretell what ſort of people will be moſt liable to ſuffer from the ſour ſpecies of ſaburra.

The oppoſite to this, which is the putrid, may be generated from feeding too much on animal ſubſtances, without the proper mixture of vegetables, and from the too long delay of putreſcent materials in the firſt paſſages; whence they may even paſs beyond the ſour ſtage of fermentation, and proceed to the third or putrid ſtage, and then they muſt of neceſſity produce ſickneſs and nauſea.

The bitter ſaburra will be generated when there is too great a ſecretion of bile; or when it is delayed too long in the duodenum, and riſes into the ſtomach.

The tough inſipid ſaburra appears to be owing to an over ſecretion of the mucus, which is naturally deſtined to lubricate and defend the inſide of the whole alimentary canal; this is generally found in relaxed habits, and in hard drinkers, brought on, no doubt, from the continual ſtate of irritation in which the excretory ducts of the mucous glands are kept, by the repeated affuſion of ſtimulating liquors.

This ſuperabundance of mucus will be apt to deſtroy the diſſolvent power of the digeſtive fluids, and thus hinder digeſtion; and if fat or oily ſubſtances be taken into the ſtomach, while in this ſtate, they will remain unmixed with the watery part of the food; and turning ſharp from the mere heat of the place, will produce the rancid, or empyreumatic ſpecies of ſaburra.

Though the greater number of the diſeaſes which afflict the human body originally ſpring from ſources already mentioned, yet there are other poſſible cauſes which may produce different ſpecies of morbid affection, and which the ſyſtematic writers refer to what are termed in the medical ſchools Non-naturals.

Under which title are comprehended the influences, 1. Of the atmoſphere. 2. Of the food, whether ſolid or liquid. 3. Of the voluntary motion and reſt of the body. 4. Of ſleep and watching.

ing. 5. Of the paſſions and affections of the mind. And, 6. Of the things retained in, or diſcharged out of the body.

To take theſe in their order, we may obſerve, firſt, with reſpect to the influence of weather and change of climate, that exceſs of heat in the atmoſphere expands the fluids, increaſes the cutaneous diſcharge, while it leſſens that by urine; hence a diſſipation of the moſt ſubtile part of the juices, producing exceſſive thirſt, reſtleſſneſs, waſting of the fleſh, and loſs of ſtrength.

It was once thought that a man could not live in an atmoſphere heated beyond the degree of his own blood, but late obſervations have ſhewn the contrary: when Dr. Lining of Charles-Town, South Carolina, and governor Ellis of Georgia, firſt publiſhed their obſervations, which ſhewed that Fahrenheit's thermometer is ſometimes up at 103, in the ſhade, or even higher, in thoſe climates, and yet people enjoy health, it was with ſome difficulty that they obtained credit; but recent obſervations, and experiments, made both by members of the royal academy of ſciences, and fellows of the royal ſociety, ſhew that the human body is capable of bearing, for ten or fifteen minutes, the air of a chamber heated to the 211th degree.—(See the account in the philoſophical tranſactions, 1774, of the experiments made by Dr. Fordyce and ſome other gentlemen.)

A cold atmoſphere, if in the extreme, may congeal the blood, and cauſe immediate death, or at leaſt a mortification of ſome of the extremities; inferior degrees of cold, will check the cutaneous diſcharges,

diſcharges, excite cough, and be apt to lay the foundation for painful or inflammatory diſeaſes.

Dry weather in general is not held to be remarkably productive of diſeaſes, but a moiſt atmoſphere is always conſidered as unwholeſome, and ſuppoſed to lay the foundation of morbific changes in the fluids, while it deſtroys the tone of the ſolids: moiſture if joined with heat is apt to generate thoſe miaſmata that are the ſources of putrid fevers; cold and moiſture, unleſs the ill effects are obviated by warm cloathing, and a generous courſe of diet, ſeldom fail to produce the putrid ſcurvy.

It is to be confeſſed, however, that our knowledge concerning the effects of theſe ſenſible qualities of heat and cold, moiſture and dryneſs in the atmoſphere, is too vague to be of much practical uſe; for, notwithſtanding all the pains that many laborious men have taken to keep exact regiſters of the weather for a long ſeries of years, the matter, as yet, is far from being brought to ſuch a degree of perfection, as to enable us to ſay, with any tolerable certainty, what diſeaſes are produced by the different kinds of weather: we can only ſpeak of them in general terms; for as to thoſe particular diſeaſes which are frequently obſerved to ſeize great numbers of people at certain ſeaſons, and whoſe progreſs may be traced from one country to another, though they are evidently ſpread by ſomewhat conveyed in the atmoſphere, yet no perſon has hitherto been able to diſcover what this morbific ſomewhat is; ſo that in this, as well as with reſpect to the other ſpecific kinds of morbific matter, we muſt

muſt be contented to obſerve effects without loſing time in the inveſtigation of cauſes.

The injuries which may ariſe from the ſecond claſs of the non-naturals have been already touched on, when we ſhewed how the different kinds of ſaburra might be produced; to enter into a very minute detail would carry us beyond the bounds which we have preſcribed to ourſelves; however, we ſhall briefly mention the conſequences which will naturally follow when the food offends either in reſpect to quantity or quality.

When the ſtomach is overloaded by an improper quantity of food, the motory fibres of the coats being over-diſtended, may loſe their power of propelling the contents, which being thus retained, will ſwell the ſtomach, occaſion ſickneſs, difficulty of breathing, and perhaps fainting; and if the load be not ſpeedily thrown off by vomiting, this extraordinary quantity of fermentable ſubſtances will go on to the acid, or even to the putrid ſtage of fermentation, and produce flatulent belchings, pain in the ſtomach, and ſevere gripings in the inteſtines, ſometimes with and ſometimes without purging.

On the other hand, a deficiency of proper food, or too ſevere faſting, beſide the immediate diſtreſs which is occaſioned from not ſatisfying the natural appetite, will render the juices in general too ſaline and acrid, which will ſoon become manifeſt in the ſaliva and in the bile: from this ſharpneſs in the animal fluids will proceed a variety of morbid diſtreſs, particularly thirſt, weakneſs, waſting of the

fleſh,

fleſh, inability to ſleep, ſpaſm, delirium, and in the end, death.

When the alimentary ſubſtances offend, with reſpect to quality, it is uſually owing to their being either too acrid, too viſcid, or too oily; each of theſe, as hath been already ſhewn, will tend to produce the different kinds of ſaburra; and theſe again will give riſe to a number of complaints formerly enumerated.

The ſubſtances on which we feed are, or ought to be, of ſuch a nature, that the digeſtive organs have power to change the combination of their inſenſible particles, in ſuch manner that they may be aſſimilated to, and united with the ſubſtance of our bodies.

But there are many things which we occaſionally take into the ſtomach, either by accident or deſign, which are not capable of being ſo changed or aſſimilated; ſome of theſe have the power of producing ſuch great and ſudden changes in the animal motions, that they raiſe very high degrees of morbid diſtreſs, and often deſtroy life. Theſe ſubſtances are termed poiſons, and act, ſome of them, by exciting the animal motions, and others by ſtifling and ſuſpending them.

Some poiſons act moſt evidently on the vaſcular ſyſtem, and accelerate or ſuſpend the motion of the general maſs of groſs fluids; while others peculiarly affect the nervous ſyſtem, occaſioning nauſea, vomiting, pain, giddineſs, loſs of ſight, delirium, convulſions, ſleepineſs, and loſs of ſenſe.

Some

Some again have their action determined to particular organs, and either promote or interrupt particular secretions.

Animal poisons, such as the juice of the viper, and other venomous reptiles, do not appear to be hurtful if taken into the stomach; but the vegetable, as well as the mineral poisons, are found, in general, to act both ways, either when swallowed, or when introduced by a wound through the skin.

These vegetable or mineral substances, which are thus capable of producing such great and sudden changes in the animal motions, that, if imprudently administered, death must ensue, are, many of them, used in medicine, as very powerful remedies, and frequently produce salutary changes when skilfully managed.

Thus opium, many of the cathartics and emetics of vegetable production, and the various preparations of mercury and antimony, are either poisons or remedies, just as they happen to be administered.

With respect to the influences of the third and fourth classes of non-naturals, it is sufficiently obvious, that violent and too long continued muscular action must excite too great a velocity in the circulation, increase the animal heat, dissipate the finer parts of the blood, occasion thirst, wasting of the flesh, and loss of strength; and if pushed to the extreme, will certainly destroy the healthy crasis of the blood, and render it unfit for the purposes of life; or if the habit be already full of corrupt juices, and any of the viscera be unsound,

sudden

ſudden death may enſue from violent exertions of the muſcular power.

Too little ſleep, or over-watching, exhauſts the ſtrength, impairs the mental powers, and waſtes the fleſh, obſtructs the digeſtive proceſs, and vitiates the general maſs of fluids, by rendering them acrid; whence may ariſe continual reſtleſſneſs and delirium.

Too much reſt from muſcular action, and too much indulgence in ſleep, diminiſh the power of the muſcular fibres, and retard the progreſſive motion of the fluids; whence languor, dulneſs of the mental faculties, corpulency, and dropſical collections, in conſequence of the deficiency of abſorbent power in the valvular lymphatics, whoſe action is greatly aſſiſted by the lateral preſſure from the muſcles while they are in motion.

It is aſtoniſhing to ſee what changes may be wrought in the corporeal frame, in conſequence of violent agitation of mind. Morgagni, in his book "de Sedibus Morborum," (Epiſt. 37. Art. 2.) has given two very remarkable inſtances; the one of a perſon who died after being thrown into a violent fit of anger, and the other from being ſtruck with fear.

Anger and joy create intenſeneſs and accelerate the motions of the vaſcular ſyſtem, whence heat and reſtleſſneſs.

Fear and grief have contrary effects; occaſion a ſpaſmodic conſtriction, drive back the fluids from the circumference, and retard the motions in the

the vaſcular ſyſtem; whence coldneſs, oppreſſion, difficulty of breathing, thirſt, and loſs of ſtrength.

The more compound affections of the mind will raiſe, depreſs or ſuſpend the animal motions, according as they ſhall chance to partake moſt of the angry and the joyful, or of the fearful and the melancholy; as alſo according to the duration of the paſſion, and degree of its violence.

The laſt claſs of non-naturals, which reſpects the diſcharges of the body, is a fruitful ſource of complaints, which will differ, according to the nature of the diſcharge, that is either ſuppreſſed or preternaturally increaſed; and many of the diſorders ariſing from ſaburra, which have been already mentioned, are to be referred to it; beſide which, we are to conſider what may be the effects of a too profuſe diſcharge by the bowels, by the kidneys, or by the ſkin, as alſo what muſt enſue from a ſuppreſſion or retention of the different matters, which ought to be thrown off by theſe three different outlets: when we come to enumerate the different ſymptoms of diſeaſes, we ſhall have occaſion to mention all theſe complaints which ſpring from the ſources here mentioned, and therefore are not under the neceſſity of introducing them here; only in general it may be noticed, that the ſuppreſſion or retention of excrementitious matters of every kind muſt neceſſarily create diſtreſs, not only by diſtending, weakening, or perhaps rupturing the canals or receptacles wherein they are lodged; but alſo by vitiating and corrupting the general maſs of fluids, which

which will thus become overcharged with thoſe noxious matters that ought to be thrown off.

Large and ſudden diſcharges, either of blood or of any ſecreted fluid, which is not of the excrementitious kind, immediately produce weakneſs, deſtroy the tone of the ſolids, and diſpoſe the remainder of the maſs to run into morbific combinations.

If we now add to all the various things already mentioned, thoſe which are applied to the body externally, and which may create diſtreſs, by irritating, diſtending, conſtringing or criſping up the living ſolids, or which may divide or deſtroy the ſubſtance of either hard or ſoft parts, by fracturing, bruiſing, burning, or wounding, we may then form an eſtimate of the poſſible cauſes of diſeaſes, and underſtand what a variety of things may, occaſionally, prove the ſource of different ſpecies of morbid affection, general and local; but we muſt always take care never to confound theſe remote or poſſible cauſes with the immediate or actual cauſes.

CHAP. III.

Inquiry into the Nature, Cauſes, and Conſequences of the general Symptoms of Diſeaſes;—Exceſs of Animal Heat;—Senſation of exceſſive Cold.

HAVING ſhewn the various remote cauſes of morbid affection, let us now proceed to explain the nature, inveſtigate the immediate cauſes, and point

point out the conſequences of the fifteen general ſymptoms : in order to lay a ſure foundation for underſtanding the nature of diſeaſes, which are only ſo many combinations of theſe, variouſly blended with each other, and with local diſorders, in different degrees and proportions.

If the moderate, equable, and free circulation and diſtribution of the ſeveral fluids throughout every part of the vaſcular and nervous ſyſtems, conſtitute the perfectly healthy ſtate, it then follows that whenever the motions of either ſyſtem ſhall become intenſe, remiſs, or irregular, or ſhall be altogether ſuſpended, then various kinds and degrees of diſtreſſing ſenſation and inability muſt enſue, and continue, ſo long as the diſorders in reſpect of the animal motions continue ; but when theſe ſhall again be reſtored to order, and the natural moderation, freedom, and equability take place, then every painful and diſtreſſing ſenſation will ceaſe, and all the powers of mind and body reſume their original vigour : ſuch then are the immediate cauſes of all the general ſymptoms ; but we ſhall conſider each of them apart, and take them in the order they were firſt enumerated.

EXCESS of ANIMAL HEAT. — Since the invention of the thermometer, we know that the natural ſtandard of heat in the human body is from the 94th to the 98th degree of Fahrenheit's ſcale ; it is ſeldom however that we take the trouble, in common practice, of meaſuring the exceſſes of heat by this inſtrument, but for the moſt part truſt to our own ſenſe of feeling, or depend

pend on the patient's information; for when ſick perſons are capable of deſcribing truly how they are affected, we are always to form our judgment on their report; and even though we ſhould perceive a degree of heat that exceeds the healthy ſtandard, yet, if it be not accompanied with ſome other diſtreſſing or uneaſy ſenſation, we are not to look on this exceſs as morbid; as for inſtance, a man may overheat himſelf by violent exerciſe, eating high-ſeaſoned meats, or drinking vinous liquors; but if this increaſe of heat be not accompanied with ſome of the other general ſymptoms, ſuch as pain, ſickneſs, or loſs of ſtrength, it will in a ſhort time return to the natural ſtandard; whereas if we find the exceſs of heat attended by theſe or other general ſymptoms, then we are to conſider it as morbid, and may expect that it will not ſuddenly ſubſide, but rather gradually increaſe, and continue for ſuch length of time as ſhall be determined by the particular circumſtances of the caſe. Such then is the nature of that exceſs of animal heat, which we are to regard as a ſpecies of morbid affection.

In ſome caſes this morbid exceſs of heat requires to be diſtinguiſhed. In the firſt place, we are to diſtinguiſh that which is attended with a remarkably ſtrong, full, and rapid pulſe, great drineſs of the ſkin, violent thirſt, and pain in different places; from that which is attended with much ſickneſs and oppreſſion, and accompanied with extreme weakneſs and dejection; the pulſe at the ſame time being neither ſtrong nor full; and when we touch the ſkin of the ſick perſon, we ſhall be

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ſenſible of a certain degree of ſmarting, from the ſharpneſs of what is exhaled: the former kind of heat is peculiar to fevers accompanied with inflammation, while the latter is only met with in the worſt ſpecies of putrid fever.

There is a third diſtinction with reſpect to the heat that is peculiar to a certain genus of fever, which does not continue for days together without remiſſion or interruption, as thoſe juſt now mentioned; neither are its effects ſo ſpeedily deſtructive of life; this is termed the hectic heat, which returns at intervals, and is moſt remarkably felt in the palms of the hands and ſoles of the feet, where the degree is even greater and more ſcorching while it laſts than in the putrid or inflammatory fever.

And, laſtly, there is a fourth diſtinction to be made which reſpects a ſudden and momentary flaſhing of heat, that is far from being ſo alarming as any of the other three; and which is peculiar to diſeaſes, wherein there is not the leaſt degree of fever, and where the ſymptoms are of that ſort uſually denominated nervous or hyſterical.

As the natural degree of animal heat is preſumed to depend on cauſes that act both mechanically and chemically, ſo the morbid exceſs may be accounted for on the ſame principles; thus, whenever the velocity of the circulation is encreaſed, we preſume that the attrition of the blood againſt the ſides of the veſſels, and of the fibres of theſe veſſels againſt each other, muſt be increaſed, and hence that exceſs of heat which is

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the conſtant attendant in all inflammatory diſeaſes: in theſe, it is ſufficiently obvious, from the ſtate of the pulſe, and from the redneſs in ſuch parts of the body as allow us to ſee the enlargement of the ſmaller blood veſſels, that there is an extraordinary degree of motion in the arterial ſyſtem, driving on the blood with unuſual violence and rapidity.

The ſecond kind of heat diſtinguiſhed as peculiar to fevers, wherein the blood is found in a putrefactive ſtate, cannot be aſcribed ſo much to an intenſeneſs of the progreſſive, as to an exceſs of the inteſtine motion, becauſe of the weak ſtate of the pulſe, which ſhews that the circulating force is not more, perhaps may be leſs, than in the healthy ſtate; and as the heat has ſometimes been known to continue after death, this circumſtance may ſerve to confirm the opinion that the immediate cauſe of this putrefactive heat is an increaſe of inteſtine motion among the inſenſible particles of the blood.

The third kind peculiar to hectic fevers, appears to ariſe from intenſeneſs with reſpect to both progreſſive and inteſtine motion: for hereafter we ſhall ſee, that hectic fevers depend on the repeated abſorption of acrimonious matters, which being received into the circulation, not only irritate the heart and arterial ſyſtem, but alſo ſeem to increaſe the inteſtine motion of the blood, in like manner as we may obſerve mixtures in fermentation liable to have their inteſtine motion rendered more briſk by the addition of different ſubſtances.

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In these three kinds of excessive heat, the inflammatory, the putrefactive, and the hectic, the increase of motion appears to be general throughout the whole system of sanguiferous canals; but in those transient flashings, which are esteemed nervous or hysterical symptoms, the intenseness of motion must be confined to particular parts, and is not to be considered as affecting the whole circulation; and this we infer from the pulse, which in these cases is not quicker nor stronger than usual.

Having thus pointed out the differences, and established the immediate causes, let us now see what consequences and changes will ensue from a morbid excess of heat; and first of that kind which is termed the inflammatory.

The first effect of the inflammatory heat will be an enlargement of the vessels; this appears evidently in such parts of the surface of the body as are spread over with numerous blood vessels, and covered with a tender cuticle, such as the cheeks and the eyes; hence redness and flushing of the face, brightness and tension of the eyes, which make them seem to protrude, and look larger than usual; but if the irritation of the vascular system continues, and the heat goes on to increase, the texture of the blood will be daily impaired, until at length, from violent agitation, the constituent particles will deviate from that particular combination, which renders the blood in the healthy state a mild, smooth, and tenacious fluid; and the oily and saline parts will run together in an undue proportion.

Dr. Langrish, in his Modern Theory and Practice of Physic, has related some experiments which explain this decomposition of the blood, in consequence of a continuance of intenseness of motion and augmented heat; for they shew that the oily and saline particles, which in the healthy state are so closely united with the rest as not to be separated without great difficulty, are now so far loosened, that they part from the other principles, and run together in great abundance: having distilled two separate portions of blood, drawn from people in inflammatory fevers, he found the quantities of volatile salt and oil, which came over into the receiver, to be very near double to what they were in the like portions of blood, drawn from persons in perfect health; and in like manner, when he analysed the urine, he found that as the fever went off, and the saline and oily particles were in good measure discharged by this outlet, the quantities of volatile salt and oil, which came over in the distillation, were about double the quantity found in urine made while the fever was going on, and while these irritating matters remained blended with the general mass of circulating fluids; the urine becoming more and more impregnated with salt and oil, in proportion to the abatement of the heat, and other distressing symptoms.

When the oily and saline particles are disunited from the other constituent parts, and thus run together, they keep up the irritation, and add to the increase of heat, which must go on still further

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to decompound and deſtroy the healthy and natural craſis of the blood.

The craſis of the blood being thus deſtroyed, and the diameters of the veſſels preternaturally enlarged, groſs particles will be forced into cavities and canals, which, in the healthy ſtate, could only admit the more ſubtile; hence the various ſecretions muſt be impeded and diſturbed; and if the veſſels in any particular organ happen to be weaker than they naturally ought to be, and make leſs reſiſtance to the impulſe of the fluids, an inflammatory ſwelling will take place in that part; and according to the uſe and importance of ſuch organ, will give riſe to different ſymptoms, and create different degrees of pain, diſtreſs, and danger.

But even though theſe inflammatory tranſlations ſhould not enſue in conſequence of the irritation and intenſeneſs of motion in the vaſcular ſyſtem, yet if the offenſive particles which keep up the diſturbance be not ſeparated from the blood, and allowed to paſs off in ſome of the natural diſcharges, or do not eſcape into the cellular ſyſtem among the inert ſolids, which are not ſuſceptible of ſtimuli, the continued agitation will deſtroy the craſis of the blood, and render it unfit for ſuſtaining life.

It is to be obſerved however, that though we often meet with caſes, where we infer from the pulſe, that the force and velocity of the fluids in circulation are double what they ought to be in the healthy ſtate, yet it does not appear from the thermometer that the increaſe of heat keeps pace with the increaſe of circulating force; things being

ſo ordered, it does not always follow, that the texture of the blood is ſo much injured by the increaſe of heat, as to render it unfit for the purpoſes of life; on the contrary, this ſymptom, though diſtreſſing for the time, and accompanied with others which are very alarming, frequently tends to a ſalutary concluſion, as it appears to be the immediate means of ſubduing or attenuating ſuch acrid and offenſive matters, as might otherwiſe deſtroy the texture of the veſſels: and theſe offenſive matters being thus ſubdued, attenuated and corrected by the augmented heat, become capable of being ſeparated and thrown off from the general maſs, ſo as to free the body from diſtreſs. And hence, as we ſhall ſee in the proper place, it is the buſineſs of the phyſician on many occaſions, particularly in eruptive fevers, ſo to regulate this morbid exceſs of heat, that it ſhall neither riſe too high nor fall too low.

The conſequences of exceſſive heat muſt be ſtill more deſtructive in putrid fevers, where we ſuppoſe the inteſtine motion to be greatly encreaſed, than in caſes purely inflammatory, where it appears that there is only an increaſe of velocity in reſpect of the progreſſive motion: for in theſe putrid fevers the blood loſes its viſcidity, and becomes capable of tranſuding through the pores in the coats of the arteries; whence enſue hemorrhages, and red or livid ſpots on the ſkin.

But in hectic fevers, where there are always ſome hours of remiſſion, the heat, though exceſſive, and very diſtreſſing for the time it laſts, does not ſo immediately either deſtroy the craſis of the blood, nor

nor melt down the ſolid fibres, as it does in the caſes of continued inflammatory, or putrid fevers, where the heat is kept up, and goes on to increaſe, till it riſes to the higheſt pitch that the blood is capable of receiving in the human body.

In the end, indeed, hectic heats generally do deſtroy the craſis and texture of both fluids and ſolids.

As to the fourth kind of heat, which was mentioned as peculiar to hyſterical caſes, the conſequences are ſeldom either very diſtreſſing or immediately deſtructive, for being of no long continuance, nor diffuſed throughout the whole vaſcular ſyſtem, none of theſe alterations in the craſis of the blood, or texture of the veſſels, are found to enſue.

SENSATION of EXCESSIVE COLD.—Before the ſenſation of exceſſive cold can be conſidered as a ſpecies of morbid affection, it muſt always be accompanied with ſome of the other ſymptoms that were enumerated; thoſe which moſt commonly concur, are oppreſſion and weakneſs, but frequently there is a conſiderable degree of nauſea, or perhaps vomiting, attended with pain in the head, or in the ſmall of the back, violent thirſt, and ſhivering.

All fevers that invade ſuddenly, and many of thoſe which come on by degrees, begin with this ſymptom; but as exceſſive heat is ſometimes met with in diſeaſes not febrile, ſo is there a kind of exceſſive

ceſſive cold peculiar to nervous diſorders, and not accompanied with any unuſual oppreſſion, ſickneſs or nauſea, the diſtinguiſhing attendants of that kind of exceſſive cold, which is obſerved to begin the attack of a fever; whereas a ſtupor, or general inſenſibility, is the ſymptom that moſt commonly accompanies the extreme coldneſs in caſes merely nervous.

As there is no evident interruption nor remiſſneſs with reſpect to the general motions of the vaſcular ſyſtem (which we can always know by the pulſe) in this kind of exceſſive cold that is peculiar to nervous diſeaſes, we muſt look for its cauſes in the nerves particularly diſtributed to the ſkin; theſe are preſumed to induce this particular ſenſation, in conſequence of ſome changes in their ſtate, which it would be a vain attempt to explain, and which often depend on ſympathy with the ſtomach, or ſome other of the viſcera; but as to the cauſes of the other kind, peculiar to febrile diſeaſes, there we may ſpeak with ſomewhat leſs uncertainty, as the changes evidently affect the motions of the vaſcular ſyſtem, and in ſome meaſure fall under the cognizance of the external ſenſes.

For almoſt every one of the attendant circumſtances and appearances ſerve to demonſtrate that the actual or immediate cauſe of this uneaſy ſenſation of exceſſive cold, which is the beginning-ſymptom in ſo many ſpecies of fever, is a ſtagnation or ſtoppage of the blood in the minute extremities of the arterial ſyſtem; and not only a ſtoppage of theſe veſſels, but alſo of the ſtill more minute and finer tubes,

tubes, which ſerve to ſtrain and carry off the urine and perſpirable matter. This we may be aſſured of, from the paleneſs and ſhrivelling of the ſkin over the whole body; from the general ſhrinking in, which is evident from rings becoming looſe, that but a little while before exactly fitted the fingers; from the thirſt; and from the drying up of iſſues or other running ſores; from the livid colour of the nails, under which the blood plainly ſtagnates; from the ſmall quantity of clear urine made at theſe times; and laſtly, from the oppreſſive load at the center, on account of the ſtoppage which the fluids meet with in their paſſage through the veſſels at the circumference. But here it will be aſked, What is the immediate or actual cauſe of this ſtagnation, that is ſo extremely evident from all theſe circumſtances juſt now mentioned?

There are two opinions in reſpect of this matter, which have been embraced by the chiefs of the medical ſchools: one party look on the fault to be in the fluids, which are alleged to be too viſcid to paſs with freedom through the extremities of the fineſt arteries, whoſe diameters are ſuppoſed to leſſen gradually, as they recede from the center: the other party hold, that the defect is in the veſſels which tranſmit the fluids, and they maintain that theſe veſſels are endowed with a power of contracting or ſtraitening their channels, ſo as to hinder the fluids from paſſing through. The former opinion was for a time the prevailing one, but now ſeems rather exploded; for the notion that the arteries are conical tubes, has been very ſatisfactorily ſhewn to be falſe, by obſerving with a microſcope the

the form of the capillary arteries in living animals; this inſtrument diſcovers theſe canals to be truly cylindrical; ſo that even ſuppoſing there were viſcid particles in the fluids, they would not be detained on this account in the ſtraiteſt part of the minute arteries. But beſides this, when we obſerve the effects of certain paſſions of the mind, which produce inſtantaneouſly the uneaſy ſenſation of exceſſive cold, together with oppreſſion and quick breathing, and obſerve at the ſame time how the blood forſakes the lips and cheeks, we cannot help being convinced that theſe changes do not proceed from any increaſe of viſcidity in the fluids, but manifeſtly enſue in conſequence of a ſudden conſtriction of the veſſels at the circumference, denying a free paſſage to the blood, and driving it in upon the center. The like effects may alſo be obſerved to follow upon the retention of offenſive matters in the ſtomach and inteſtines, or even by the ſeeing of nauſeating things, or barely calling to mind the having once ſwallowed ſuch diſagreeable ſubſtances; hence we conclude, that though there may be caſes wherein the notion of lentor may fairly be admitted; yet ſudden conſtriction of the veſſels, and not viſcidity of the blood, is by far the moſt frequent cauſe of the ſymptom whoſe nature we now endeavour to explain.

As all animal motion whatever appears to proceed from the nerves, ſo we muſt neceſſarily refer this conſtriction of the minute veſſels to ſome change in the nervous ſyſtem; but wherein this change conſiſts, or how it is brought about, we muſt confeſs our ignorance, and content ourſelves

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to reſt the matter here, nor puſh the inquiry further than the vaſcular ſyſtem, in the extremities of which we evidently perceive a ſtagnation: this is termed ſpaſmodic conſtriction, and has often been denominated, ſimply, ſpaſm: however, as this uſe of the word ſpaſm is not perfectly agreeable to the meaning of the ancient writers, nor to the ſenſe of the word, as intended to be uſed in this work, it ſhall never be introduced but when we deſign it to mean that violent and involuntary contraction or exertion of the muſcular fibres, which is the oppoſite ſymptom to weakneſs or relaxation.

Let us now inquire into the effects that muſt enſue in conſequence, either of ſpaſmodic conſtriction; or of a ſtoppage in the extremities of the fineſt arteries, occaſioned by the ſtagnation of viſcid particles.

If we ſuppoſe the conſtriction or ſtoppage to be general throughout the whole circumference of the vaſcular ſyſtem, it is obvious that inſtant death muſt be the conſequence; and this actually happens, ſometimes, from a violent and ſudden fright, when the circulation is inſtantly ſtopped, and the fluids all thrown in upon the center, where the heart being oppreſſed by the load, is unable to perform its uſual motions; ſometimes, in places where the air is replete with peſtilential vapours; and alſo in conſequence of poiſons that are exceedingly active, particularly that of the poiſoned arrows which are in uſe among ſome of the Indian nations in South America. The French academicians, who went to Peru in the year 1739, to meaſure a degree of the earth's ſurface, brought home, among other curioſities,

ſities, ſome of theſe poiſoned arrows, with which they made experiments in preſence of the academy, by wounding different animals. Death almoſt inſtantly followed the ſlighteſt puncture; and, on opening the animal afterwards, the auricles and ventricles of the heart, together with all the larger trunks adjoining, were found greatly diſtended with blood, and in ſome inſtances actually ruptured.

Theſe, however are extraordinary caſes; for in the beginning of common fevers the ſpaſmodic conſtriction is not to be ſuppoſed as affecting the whole circumference of the arterial ſyſtem; it is indeed ſufficiently extended throughout the veſſels belonging to the ſkin, to cauſe a ſtagnation in them, and thereby produce the ſenſation of exceſſive cold, together with paleneſs and ſhivering; for the ſame interruption that is capable of producing the cold and paleneſs, as it hinders the muſcles from being ſupplied with blood ſufficient to preſerve their proper tone, muſt likewiſe often produce irregular contraction and relaxation of their fibres, which will become manifeſt by the ſhivering or tremor, termed by the writers rigor and horripilatio.

Anxiety, or oppreſſion about the præcordia, is alſo a neceſſary conſequence of ſpaſmodic conſtriction, becauſe of the reſiſtance made to the power of the heart.

As this oppreſſive load cannot long remain, conſiſtent with life, the powers which ſuſtain life (all comprehended in the word Nature) immediately begin to exert themſelves: the heart being the

the moſt irritable of all the muſcles in the body, is now ſtimulated by the application of ſuch an unuſual quantity of blood, and drives on the general maſs of circulating fluids, with violence, rapidity, and irregularity, becauſe the arterial ſyſtem is more open and free in ſome places than in others: the neceſſary effect of this intenſeneſs of motion muſt be exceſſive heat, as before explained, accompanied with diſtreſſing thirſt, and inability to ſleep; to which will ſucceed pain, delirium, and other ſevere ſymptoms, if things do not take a favourable turn; for ſhould the intenſeneſs of motion keep up, while the conſtriction or obſtruction continue to affect the veſſels, and render the circulation irregular, the heat will increaſe, and produce all thoſe deſtructive changes, with reſpect to the craſis of the blood, and the texture of the veſſels, which have been already explained in the preceding ſection.

CHAP. IV.

Sickneſs, or Nauſea;—Exceſſive Thirſt.

BY the words Sickneſs and Nauſea, is meant that diſreliſh, or loathing of things which in the time of perfect health are highly pleaſing, and agreeable to nature.

We ſhall often perceive from the pulſe, while perſons complain of ſickneſs, that there is evident diſorder in the vaſcular ſyſtem: but this diſtreſſing ſenſation, which every body muſt at times have

have experienced, is always to be referred to ſome diſturbance or irregularity in the nervous ſyſtem.

Sickneſs is either idiopathic, or ſympathetic: we may conſider it as idiopathic when we know the ſtomach to be loaded with any of the ſpecies of ſaburra formerly mentioned, and which may be diſtinguiſhed by attending to the circumſtances there laid down; or when it can be fairly aſcribed to ſomewhat lately ſwallowed. But the whole inteſtinal canal, and more eſpecially the ſtomach, is endowed with ſuch exquiſite ſenſibility that it ſympathizes with every part of the body where nerves are beſtowed, and therefore is liable to be diſordered in conſequence of the affection of every ſenſible part; and the more ſenſible that part, the more readily will the ſtomach be affected: hence thoſe high degrees of nauſea and vomiting, conſequent on wounds of the head, and concuſſion or preſſure of the brain; hence alſo the nauſea that always attends a diſtraction of the fibres of the biliary ducts, or ureters, when ſtoney concretions are paſſing through them; and which accompanies the diſtenſion of the uterine fibres in the earlier months of pregnancy.

Even any unuſual kind of motion or agitation of the whole body is capable of raiſing the higheſt degrees of ſickneſs, as we obſerve in the caſe of perſons on ſhipboard in a rough ſea: many affections of the mind, excite ſickneſs, or at leaſt deſtroy the appetite; and thus we may underſtand whence it comes that there is ſcarcely any diſeaſe wherein ſickneſs or loſs of appetite does not

not conſtitute a part. It is inſeparable from all febrile diſeaſes, and in theſe, we may reaſonably conclude from the drineſs of the inſide of the mouth, that the ſpaſmodic conſtriction extends to the ſtomach, and renders the nerves there incapable of exerciſing their function, in the ſame way that we ſee thoſe of the tongue rendered incapable of receiving and tranſmitting the impreſſions of the different ſubſtances taken into the mouth, ſo long as the natural moiſture is wanting: hence it is a favourable ſign, when we obſerve people in fevers expreſs a deſire to take ſolid food of any ſort, no matter how different from that which they commonly uſe.

If ſickneſs ſhould continue for any conſiderable length of time, a waſting of the fleſh muſt neceſſarily enſue, from the want of proper ſupplies of nutritious matter, to replace the loſs which is ſuſtained from the perpetual action of the fluids upon the coats of the veſſels, abrading and waſhing off part of their ſubſtance: hence the greater the degree of intenſeneſs in the motions of the vaſcular ſyſtem, which accompanies ſickneſs, the more ſudden and apparent will be the waſting of the fleſh.

Weakneſs, or loſs of ſtrength, muſt alſo be another neceſſary conſequence of want of appetite; becauſe the greater the loſs of ſolid particles, the greater of courſe muſt be the want of firmneſs in the muſcular fibres.

THIRST.—The fourth ſpecies of ſimple morbid affection that was mentioned, is diſtreſſing thirſt:

thirſt: this, like all the reſt, muſt always be joined to ſome other ſymptom before it can be conſidered as part of a diſeaſe; thoſe which moſt uſually accompany it are either exceſſive heat or exceſſive cold; oppreſſion, weakneſs, loſs of appetite, and inability to ſleep.

The immediate cauſe of this ſymptom is a ſtoppage of the pores, which ought to ſupply lymph and mucus, in order to lubricate and moiſten the tongue, the whole inſide of the mouth, fauces, and œſophagus.

This ſtoppage may be occaſioned either by ſpaſmodic conſtriction, ſtraitening the little excretory ducts and pores, which open from the mucous folliculi; or it may ariſe from viſcid matter clogging and choking up the ſame.

Spaſmodic conſtriction generally appears to be the cauſe of violent thirſt in the cold fit, or beginning of fevers, becauſe we may obſerve that fear, grief, or anxiety of mind, which always produce different degrees of ſpaſmodic conſtriction, conſtantly give riſe to different degrees of thirſt. But when thirſt is the attendant of exceſſive heat, then it appears, that, beſide the ſtraitening of the pores in conſequence of ſpaſmodic conſtriction, the finer parts of the mucus, which is deſtined to lubricate the parts juſt now mentioned, are exhaled by the exceſs of heat, and leave the more viſcid part, which hardens into ſloughs that cover the tongue, and hinder the natural diſcharge of lymphatic vapour.

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We ſee then that thirſt ariſes from a dryneſs of the tongue, and inſide of the mouth, fauces, and œſophagus: but in ſome caſes, the conſtriction of the pores in theſe parts is not accompanied with that more general ſpaſmodic conſtriction, which is the ſource of fevers, and which is always attended with oppreſſion, ſickneſs, and loſs of ſtrength; and in theſe caſes the thirſt, which is often exceedingly troubleſome, is held to be a purely nervous ſymptom.

There are other diſeaſes alſo void of fever, wherein thirſt is very diſtreſſing, and where it appears to ariſe from the watery part of the blood being diverted to other outlets, particularly in the diſeaſe called Diabetes, wherein the urinary diſcharge is much more than it naturally ought to be. In fluxes alſo of the belly, in caſes of profuſe ſweating, and in dropſies, where the watery part of the blood ſeparates from the other conſtituent parts, and falls aſide, either into the cellular ſyſtem at large, or into ſome of the greater cavities.

As thirſt is one of the moſt uneaſy ſenſations, it muſt in general prevent ſleep; and hence one reaſon for that reſtleſſneſs, which is peculiarly attendant on fevers: a dryneſs of the mouth alſo muſt impair the power of the organ of taſte, and by hardening the ſloughs on the tongue, and about the gums, muſt give a diſagreeable or maukiſh flavour to every ſort of meat or drink; and hence one cauſe of that diſtaſte which people in fevers have to almoſt every thing but ſuch as are of a ſubacid nature, which are peculiarly adapted to waſh off theſe offenſive ſloughs, and

by

by their gentle ſtimulus provoke the ſecretion of lymphatic vapour from the pores of the parts affected.

As the immediate cauſe of thirſt in fevers, is either held to be a ſtoppage of the finer veſſels by viſcid matter, or ſpaſmodic conſtriction, which alſo keep up the reſt of the ſymptoms, it naturally follows that it muſt be a favourable appearance, when we obſerve the tongue or mouth to grow moiſt, and the thirſt grow leſs diſtreſſing; as theſe changes evidently ſhew that the obſtacles are giving way, and the circulation beginning to prove equable and free.

CHAP. V.

Pain;—*Itching.*

IT is unneceſſary to diſtinguiſh the different kinds of pain, as theſe always depend on the fancy of the patient; but it is of ſome conſequence to inquire into the immediate cauſes of this ſymptom, which is ſo general, and at the ſame time ſo diſtreſſing; for not to mention fevers, wherein pain is for the moſt part one of the ſymptoms, there are many other diſeaſes wherein it is never abſent, and forms their diſtinguiſhing character.

Since it is evident that pain conſtantly inſues upon the puncture, laceration, or overdiſtenſion of ſenſible fibres, ſome writers have taught that it is always to be aſcribed to a diſ-

traction

traction of the nervous filaments; others again have imagined that these are curled up or crisped, in the way that we may observe the fleshy fibres of animals to curl up, when any thing acrid is applied to them: however, the appearances in living animals, which have been subjected to experiments, do not favour this last mentioned hypothesis; since it is found, that the nerves have not this power of contracting or crisping, when they are touched either with a sharp-pointed instrument, or with substances of an acrid nature.

The nerves are undoubtedly the subjects of pain, and yet the chords themselves do not apparently shew the least disorder when touched by any of the things just now mentioned: as to the other hypothesis, which supposes pain to arise from a distraction of the nervous filaments, it seems plausible, until we call to mind that a ligature on any nervous chord immediately renders the animal incapable of feeling the pain, which otherwise would be severely felt, from cutting, corroding, or tearing the parts which are supplied by this chord: hence we must infer, that pain is to be immediately ascribed to some change in the state of a fluid, and not merely to any distraction, tension, or crisping up of solid filaments.

As it is impossible to describe or determine the peculiar mode of receiving and transmitting, through the medium of the nerves, the ordinary impressions of external objects, which give no uneasy sensation, so is it equally hard to find out those changes in the state of the nervous system,

which give riſe to the ſenſe of pain: only as we have preſumed that all the different ſenſations ariſe in conſequence of certain and determinate degrees of vibration in the elaſtic and ſubtile fluid, with which the medullary ſubſtance of the nerves is imbued, it cannot be accounted unreaſonable to ſay, that pain, which is an exceſs of ſenſation, is owing to an exceſs of the vibratory motion. Beſides, as ſome proof of this conjecture, it is obſervable, that until the medullary part of the nerve comes to be diſturbed or touched, animals do not ſhew that they feel any remarkable degree of pain; for while the membranous ſheath, which defends this medulla, remains entire, a nervous chord may be touched with acrid ſpirits, or with a ſharp-pointed inſtrument, and yet no pain enſue; but in the inſtant theſe things get through the membranous ſheath, and come to touch the ſoft medullary part that is incloſed, then the ſenſation of pain is felt, and conveyed to the ſenſorium as quick as lightning, provided the communication between the brain and the part which is injured be not interrupted by the means of ligature or preſſure on the particular nervous chord, which is ſubjected to the experiment.

Of the various things capable of exciting pain, ſome act mechanically, in proportion to their degrees of hardneſs, ſharpneſs, weight, and the force with which they are impelled; others act chemically, on the inſenſible particles of the fluids, by virtue of attraction or repulſion.—Pain, like ſickneſs, is frequently ſympathetic; but whether it depend on offenſive matter acting on nerves

nerves at a diſtance from the place where the diſtreſs is felt; or whether it be idiopathic, and is created by the immediate operation of the exciting cauſes in the part where the pain is ſeated, the neceſſary conſequence muſt be a proportionable reſtleſſneſs; for, as the mind ſtudiouſly endeavours to get rid of the uneaſy ſenſation, it labours to obtain relief by toſſing, and frequent change of poſture: hence ſleep is baniſhed; the thoughts are diſturbed; and if the pain continues to increaſe in violence, a variety of extravagant and irregular motions and actions will enſue: thus the motions of the vaſcular ſyſtem in general will be raiſed above the healthy rate, creating an exceſs of heat and violent thirſt: and very often, if the pain was raiſed at firſt by the application of any thing acrid, or if it proceeded from ſome external injury, there will then be an extraordinary flow of blood and humours to the veſſels in that particular place, which will either run themſelves off in a diſcharge, or diſtend the canals and cellular ſubſtance, and thus produce an inflammatory ſwelling.

ITCHING.—The uneaſy ſenſation of itching, when raiſed to any conſiderable degree, is as hard to endure as pain, to which it ſeems nearly allied, and is preſumed to ariſe from ſome particular change in the vibratory motion of the nerves beſtowed on the ſkin.

It is obſervable, that this ſymptom, like thoſe of pain and ſickneſs, often depends on ſympathy; thus, when worms irritate the ſenſible fibres in

the coats of the inteſtines, the diſturbance is communicated to the membrane which lines the noſe, and excites an itching there; and a ſtone in the urinary bladder frequently produces the ſame uneaſy ſenſation at the extremity of the penis.

Beſide the common external itching which appears to conſiſt in ſome diſorder of the nerves of the ſkin, there is alſo an internal itching, which is ſo generally diffuſed, that the patient cannot tell where to refer it: this ſymptom is a moſt uneaſy ſenſation; and is ſometimes met with in hyſterical caſes, occaſioning inceſſant toſſing and reſtleſſneſs.

External itching, beſide being peculiar to that ſpecies of cutaneous foulneſs, called the itch, is ſometimes a very diſtreſſing ſymptom in the jaundice, and in ſome ſpecies of eruptive fever.

Itching, like pain and thirſt, muſt neceſſarily diſturb ſleep; and if it continues violent, may be followed by delirium or ſpaſm.

CHAP. VI.

Reſtleſſneſs, or Inability to Sleep;—Somnolency.

THE continued action of the mind and body during the time that we are awake, occaſions an evident waſte of ſome ſubtile matter, on which it appears that the ſtrength and vigour of all the ſeveral

ſeveral faculties depend. This ſubtile matter is preſumed to be the fluid of the nerves.

Sleep is therefore neceſſary for recruiting the ſtrength of both mind and body; and hence it is not unreaſonable to believe, that, during the time of ſleep, the diſtribution of the ſubtile fluid is, in ſome meaſure, ſuſpended throughout every part of the nervous ſyſtem, except what ſupplies the organs, whoſe motions are abſolutely neceſſary for carrying on the buſineſs of life, namely, the heart and lungs, with the muſcles ſubſervient to their action.

How it is brought about, that the movement of the nervous fluid ſhould be thus reſtrained, and that it ſhould be withheld from the organs of ſenſe and inſtruments of voluntary motion, and yet be diſtributed to the vital organs juſt now mentioned, is a matter beyond the power of phyſiologiſts to explain; but that there is ſome ſuch alteration, and that the mode of diſtribution is different in the time of ſleep, from what it is while we are awake, ſeems not unreaſonable to believe.

If then the mechanical cauſe of ſleep in the natural and healthy ſtate be a remiſſneſs with regard to the ſupply of nervous fluid to the organs of ſenſe, both internal and external, and to the muſcles, except the heart, and thoſe concerned in reſpiration, it will follow that the oppoſite ſtate, which is conſidered as a ſpecies of morbid affection, muſt have for its immediate cauſe an intenſeneſs of motion, in reſpect to the general

ſupply

ſupply or diſtribution of the ſame ſubtile enlivening fluid.

The remote cauſes that may occaſionally give riſe to this intenſeneſs of motion are various; ſome of them depending on affections of the mind, ſuch as grief, anger, and diſappointment; others conſiſting in diſorders of the vaſcular ſyſtem, when there is an intenſeneſs of motion there, which occaſions heat and thirſt; for this increaſed force, ſo long as the veſſels of the brain keep open and free, never fails to produce that increaſe of motion in regard to the fluid of the nerves, which is preſumed to be the actual cauſe of inability to ſleep.

The conſequences of this ſymptom, if it continues obſtinate, muſt be very injurious and deſtructive; for ſupplies of food are not alone ſufficient to repair the waſte and recruit the ſtrength of the body, unleſs they be aſſiſted by the natural returns of ſleep; ſince it ſeems to be during theſe intervals of repoſe from muſcular action, and the general exerciſe of the ſenſes, that the nutritious particles are chiefly applied and fixed; but in febrile diſeaſes, wherein the uſual and natural ſupplies of ſolid food are alſo wanting, we may eaſily conceive how much the ſymptom we are now treating of muſt contribute to the general waſte of fleſh and ſtrength.

In fevers, reſtleſſneſs is one of the ſymptoms almoſt conſtantly preſent at the commencement; as the diſeaſe draws to a period, it generally changes to the oppoſite ſtate, of ſtupidity or perpetual doſing.

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There is alſo an order of diſeaſes void of fever, wherein reſtleſſneſs forms a principal ſhare of the diſtreſs; theſe are the mental diſeaſes: but as there is no unuſual intenſeneſs of motion at the ſame time in the vaſcular ſyſtem, the want of ſleep, which is ſometimes obſerved to continue for whole weeks in ſucceſſion, is not ſo immediately deſtructive of the bodily ſtrength as in fevers.

SOMNOLENCY.—The oppoſite ſymptom to reſtleſſneſs, and eighth that was enumerated, is ſomnolency, or a morbid propenſity to ſleep.

This ſymptom, when in a high degree, may well be accounted dangerous, ſince it gives reaſon to infer that the nerves are not ſufficiently ſupplied with their enlivening fluid, either from a deficiency of this ſubtile matter in the general maſs, or from ſomewhat compreſſing the nerves, ſo as to hinder the free diſtribution.

The cauſes of ſomnolency are various, ſuch as an extremely cold atmoſphere congealing the blood; accumulation of watery fluid in the ventricles and cellular interſtices of the brain, or an over-diſtenſion of the veſſels in the ſame part; extravaſated blood within the cranium, depreſſion, or fracture of the ſcull, forcing it in upon the brain, ſo as to compreſs the medullary part, and hinder the enlivening fluid to be tranſmitted from its ſource to the ſeveral organs of ſenſe and inſtruments of voluntary motion.

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Hence we may readily underſtand how this ſymptom may be a conſequence of its oppoſite; for as an increaſed velocity of circulation through the vaſcular part of the brain gives riſe to an increaſe of motion in the nervous ſyſtem, and thus prevents ſleep; ſo, when theſe veſſels, from the augmented impulſe of the blood, come to be overloaded and diſtended, they become then incapable of ſupplying the ſecretion which ought to be carried on in the brain, and moreover compreſs the nerves at their origin: and hence it is that an unnatural propenſity to ſleep is a ſymptom which we may always expect in thoſe fevers, wherein there have preceded high degrees of reſtleſſneſs and delirium.

Toward the cloſe of fevers we frequently meet with a mixture of ſleeping, and of ſudden ſtarting, which is termed coma vigil, and is preſumed to be owing to the rapid and irregular circulation through the vaſcular part of the brain, ſome parts being free, while others are over-diſtended, ſo as to compreſs the nerves at their origin.

CHAP. VII.

Anxiety;—*Difficulty of breathing.*

IT was laid down as the ſixth condition of perfect health, that there ſhould be no ſenſe of ſtraitneſs, or weight and oppreſſion, about the

the præcordia; the oppoſite to this condition, and ninth of the general ſymptoms is, that diſtreſſing ſenſation of a load or ſtraitneſs, which is termed by the medical writers Anxiety.

This complaint is always accompanied with remarkable timidity and dejection of ſpirit; for, as it is the nature of pain to impreſs the mind with an idea of preſent injury, ſo anxiety excites the notion of ſome impending evil, and hence often proves more intolerable than acute pain.

We muſt diſtinguiſh the caſes wherein there is no apparent interruption or diſorder in the vaſcular ſyſtem from thoſe wherein there is an evident obſtacle to the free paſſage of the circulating fluids through the extremities of the finer arteries: the pulſe, as will be explained hereafter, enables us to make this diſtinction.

The firſt ſpecies of anxiety is a ſymptom peculiar to maniacal and hyſterical diſeaſes: the ſecond is eſſential to fevers, and continues to diſtreſs the ſick perſon more or leſs throughout the whole courſe of the diſeaſe; for, until the ſpaſmodic conſtriction, or other obſtacles that may hinder the free and equable circulation, ſhall give way, the ſenſe of weight and oppreſſion at the center will neceſſarily remain.

That ſpecies of anxiety which was firſt mentioned as unattended with febrile ſymptoms, muſt ariſe from ſome diſorder which is ſolely confined to the nervous ſyſtem, but the preciſe nature of that diſorder will remain unexplained, until our knowledge

ledge of the nerves ſhall be more perfect than it is at preſent.

The immediate cauſes of the other ſpecies, as hath been already mentioned, are certain obſtacles to the free paſſage of the blood; theſe obſtacles ariſe from various ſources.

In the firſt place, the paſſions of fear, grief, revenge, and diſappointment, give riſe to certain degrees of ſpaſmodic conſtriction, and are conſtantly attended with proportional degrees of oppreſſion about the præcordia.

Thoſe morbific matters, generally termed miaſmata, which are the remote cauſes of different kinds of fever, particularly thoſe diſtinguiſhed by eruptions, are remarkable for being productive of extraordinary degrees of obſtruction to the freedom of circulation, and of courſe ſuch fevers are always accompanied with this ſymptom.

What is termed a plethora, or an over-fulneſs in regard to the general maſs of fluids, and a retention of any of the excrementitious humours, always produce certain degrees of oppreſſion; becauſe the weight of fluids, is not rightly proportioned to the force of the heart; when the power of the heart is impaired, or too much reſiſted, proportional degrees of anxiety muſt take place, whether it may be owing to a morbid increaſe of the fat beſtowed on the heart, dropſy of the pericardium, polypoſe concretions, oſſification of the valves or of the great arteries, aneuriſm of the aorta, or dilatation of the auricles or ventricles.

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The like diſtreſs muſt neceſſarily enſue, when the circulation through of the lungs, or abdominal viſcera, comes to ſuffer any conſiderable degree of interruption.

If the obſtacles to the free paſſage of the blood be ſuch as cannot readily be removed, which may be inferred from the heavy complaints of oppreſſion and ſtraitneſs, accompanied with an exceedingly quick, and very weak pulſe, we may then look on things as in a very dangerous ſituation, ſince theſe appearances plainly ſhew the load of blood accumulated in and about the center to be more than the heart is able to ſhake off, and conſequently that death muſt be very near at hand: for in proportion as we obſerve the pulſe to want ſtrength and fulneſs, ſo ſhall we eſtimate the degrees of real danger.

But in caſes where the anxiety ariſes from diſorder which is merely nervous, the complaints and apparent ſufferings ſhall often be very great, and yet there ſhall be no immediate danger of life; becauſe the motions of the vaſcular ſyſtem are undiſturbed, and the circulation goes on with its uſual freedom.

DIFFICULTY of BREATHING.—The breathing may be rendered difficult, either from changes in the ſtate of the atmoſpheric air; by a ſtraitening or obſtruction of the paſſages through which the air muſt paſs into the lungs; or from different diſorders which affect the lungs themſelves, and render them incapable of receiving and expelling

expelling the air, and of allowing the blood to circulate freely.

The air, if too much rarefied, will not have ſufficient force to diſtend the pulmonary veſicles, neither will it inflate them ſufficiently, if it be too much heated; while, on the other hand, if it be too denſe it may over-diſtend, or if too cold it may occaſion ſome degree of conſtriction in the bronchia. Acrid ſteams or vapours, ſuch as thoſe of ſulphur, ſpirit of nitre, ſalt of amber, quicklime, &c. when drawn in with the air, appear to act as ſtimulants, and occaſion a ſpaſmodic contraction of the air veſſels; mephitic vapours, or fixed air reſtored to a ſtate of elaſticity, when received into the lungs, cauſe inſtant death, but in what particular manner, has not hitherto been explained; poſſibly by inducing a paralytic relaxation of the motory fibres. Air that is too dry, or which is filled with ſubtile duſt, proportionally diſtreſſes the breathing; and air that is too full of humid vapours will alſo cauſe difficult breathing, as it is not fitted to carry off the perſpirable matter from the lungs ſo quickly as it ought to be exhaled.

The different parts about the fauces may be ſo ſwelled, and the membranes which line them ſo thickened, or ſo covered over with a mucous or purulent exudation, that the aperture of the glottis, and the paſſages leading to it, may be ſtraitened, or altogether cloſed up; which aperture is alſo liable to be ſhut up by a ſpaſmodic contraction of ſome of the muſcles belonging to the larynx.

With

With reſpect to the lungs themſelves, their action may be impeded from a variety of ſources; the thorax may be ſo ſhaped as to render the breathing habitually difficult; the lungs may be preſſed upon by tumours in the parts adjoining, or by extraordinary quantities of fat accumulated in the cheſt, eſpecially about the larger blood-veſſels; the membrane which lines the bronchia may be thickened, in like manner as we often obſerve that which lines the noſe and fauces to be thickened in conſequence of obſtructed perſpiration. The mucus, which is deſtined to lubricate the bronchia, may be ſecreted in too large quantities, or it may be deficient; blood may ouze into the air-veſſels from the pores or extremities of the bronchial or pulmonary arteries.

Mucus, water, or purulent matter, may accumulate in the cellular ſubſtance of the lungs; and earthy concretions, or ſchirrous tubercles, are often formed in the lymphatic glands diſperſed through the ſame, ſo as to compreſs both the air-veſſels and blood-veſſels; preventing the former from being inflated, and the latter from circulating their contents with freedom.

The blood-veſſels are liable to over-diſtenſion from too great a quantity of blood derived into them, as is the caſe in inflammations; or when the general maſs is returned from the circumference of the body to the center faſter than the lungs can receive and tranſmit it, as always happens after violent exerciſe, or in the height of a fever, when the blood is carried through the veſſels with increaſed rapidity.

Severe

Severe pain affecting the different muſcles, which are moved during reſpiration, neceſſarily renders the breathing proportionally difficult, as will alſo ſpaſmodic affections of the ſame, eſpecially the diaphragm, which is ſometimes ſtimulated by flatus in the ſtomach and inteſtines, or by acrid matters pent up there. The bronchia themſelves are alſo liable to ſpaſmodic contraction from internal cauſes, which often are not within the reach of inveſtigation. The lungs may be compreſſed, and the freedom of their motions reſtrained, by collections of water, purulent matter, or blood, in the cavity of the thorax; by ſwellings of the abdomen from dropſical collections; from the enlargement of the different viſcera, or from the bulk of a fœtus.

There is an order of diſeaſes wherein difficulty of breathing forms the predominant and diſtinguiſhing ſymptom; it is alſo a very frequent and an alarming ſymptom in fevers, owing partly to the ſpaſmodic conſtriction, and partly to the general increaſe of velocity in the vaſcular ſyſtem, which brings the blood faſter to the lungs than it can find a free paſſage through them.

When the lungs become the ſeat of an inflammation, then difficulty of breathing, accompanied with pain and coughing, makes up the greateſt ſhare of the diſeaſe; difficulty of breathing is often a ſymptom in hyſterical diſeaſes, and in theſe caſes uſually proceeds from flatus, or other offenſive matters pent up in the alimentary canal.

If

If this ſymptom ſhould riſe to the higheſt degree, and not ſpeedily give way, ſuffocation and death muſt neceſſarily enſue: the ſlighter degrees of difficulty of breathing give proportional degrees of diſtreſs, and muſt always diſturb ſleep at leaſt, if not give riſe to ſome other ſymptom.

CHAP. VIII.

Weakneſs;—*Spaſm.*

BY weakneſs we are to underſtand that ſtate of the muſcles in general, when they become incapable of ſuſtaining the weight of the body with eaſe, and properly performing ſuch actions as are dictated by the will.

There is no complaint ſo general as weakneſs, ſince in almoſt every diſeaſe we may obſerve a deficiency of bodily ſtrength; but in fevers it is a conſtant and eſſential ſymptom; for if ever we obſerve a degree of ſtrength exerted in fevers, either equal or ſuperior to what is natural, and proportional to the different circumſtances of age, ſex or conſtitution, we ſhall always find theſe exertions to be but of ſhort duration.

Some pathologiſts pretend to account for this weakneſs eſſential to fevers, by ſaying that the ſoul, which is always ſolicitous for the preſervation of the body, foreſeeing that there will be a want of ſtrength to ſubdue and expel the morbific matter, which

which gives rise to the fever, in great measure suspends the distribution of nervous fluid to all the instruments of voluntary motion, while it plentifully supplies the heart, in order to enable this muscle to exert unusual degrees of force, so that it may remove the obstacles to the freedom and equability of circulation. This, however, is an hypothesis, which will by no means satisfy those who are attached to the mechanical philosophy; and yet it must be confessed, that even these mechanical reasoners are much at a loss how to explain this matter.

The sources of strength are to be sought for in the nervous system, and we presume that it depends on the full, regular, and constant supply of subtile matter, which is distributed throughout the muscular fibres: and this presumption is founded on the experiments of dividing, or compressing a nervous chord, which constantly deprives the muscles supplied by that nerve of all their powers of strength and motion.

The actual causes therefore of weakness are said to be a deficiency, a suspension, or a remissness with respect to the distribution, or perhaps vibration of the nervous fluid, which ought to be supplied to the filaments bestowed particularly on the muscles.

The possible causes of this deficiency, suspension or remissness, may be various; some things appear to have a power of immediately spoiling, if we may so term it, the nervous fluid, depriving

depriving it of its elaſticity (we may ſuppoſe,) and rendering it leſs capable of vibration. Theſe effects ſeem to follow whenever a putrefactive acrimony obtains in the conſtitution, whether it be generated ſpontaneouſly within the body, or be received from without in the way of infection.

Violent, or long continued exerciſe, either of mind or body, impair the muſcular ſtrength, on account (as it is preſumed) of the diſſipation of ſubtile enlivening fluid; profuſe diſcharges of blood, or of ſecreted humours, alſo induce weakneſs, as taking off from the ſource which affords new ſupplies to the nervous ſyſtem; and not only ſo, but as theſe diſcharges deſtroy the equilibrium in the vaſcular ſyſtem, which ſubſiſts between the parts containing and the parts contained; for in proportion as the ſides of the veſſels compreſs and urge forward the fluids, in like proportion do the repellent particles contained in theſe fluids reſiſt and diſtend the canals; hence when this balance between the contractile power of the veſſels, and the expanſive force of the fluids comes to be deſtroyed, whether it be produced by unuſual and ſudden diſcharges, allowing the veſſels to collapſe, or, by a new and ſudden expanſion of the fluids, creating an over-diſtenſion of the canals, proportional degrees of weakneſs always enſue.

Weakneſs conſtantly takes place in all muſcular fibres that have been affected by ſpaſm;

and, as conſtantly, in thoſe that have been the ſeat of ſevere pain, which may ſerve as another preſumptive proof, that pain ariſes from an extraordinary agitation and vibration of the nervous fluid, whence neceſſarily ſucceed an extraordinary waſte and diſſipation.

Weakneſs muſt alſo follow, whenever the cellular ſyſtem comes to be preternaturally clogged and overloaded, either with watery or oily fluids; or, as it ſometimes, though but rarely happens, with elaſtic air, ſo as to compreſs the nervous filaments; hence the loſs of ſtrength in leucophlegmatic and corpulent habits, and in the diſeaſe called the emphyſema.

Weakneſs is a predominant and diſtinguiſhing ſymptom in certain diſeaſes termed palſies; and here it is, for the moſt part, accompanied with loſs of feeling: but loſs of feeling does not always, nor neceſſarily enſue upon loſs of ſtrength; for we often meet with caſes wherein the weakneſs ſhall be extreme, and yet the powers of ſenſation ſuffer little or no diminution: this is remarkably ſo in hectic fevers; for here we ſhall often find the general powers of ſenſe ſtrong till within a few hours of death. But whenever we find in fevers that inſenſibility and weakneſs are united, and eſpecially if the weakneſs was extreme from the firſt attack, we may then look on things as in the moſt dangerous ſituation.

In paralytic diſeaſes the diſorder does not affect the general circulation, nor diſturb the motions

tions of the vaſcular ſyſtem; and hence it is, that theſe diſeaſes often laſt for years, without deſtroying life; but in the weakneſs which is febrile, and which is occaſioned by the diſorder of both ſyſtems, unleſs freedom and equability in reſpect of the circulation and diſtribution throughout the whole be reſtored in due time, life cannot poſſibly ſubſiſt under ſuch united interruption and diſturbance.

SPASM.—The oppoſite ſymptom to weakneſs is ſpaſm, when the muſcular parts of the body are found to exert unuſual and unnatural degrees of ſtrength, and contract themſelves in oppoſition to the power of the will: at ſome times theſe violent and involuntary actions of the muſcles are accompanied with ſevere pain; at other times with total inſenſibility. In ſome caſes, ſpaſms are joined with febrile ſymptoms, in others they are not attended with any diſorder of the vaſcular ſyſtem; and when this happens to be the caſe, ſpaſmodic diſeaſes, like palſies, may endure for years without putting an end to life.

The immediate cauſes of ſpaſm muſt be ſought for in the nervous ſyſtem, and, we may preſume, are the oppoſites to thoſe which produce weakneſs and relaxation: hence we ſay, that ſpaſms ariſe from an intenſeneſs of motion, or an irregular diſtribution of the nervous fluid into different ſets of muſcular faſciculi; too much of this fluid being diſtributed to any particular ſet of muſcles, we may preſume, will

cauſe theſe to contract with too much force, and exert unnatural degrees of ſtrength; and as all the muſcles of the body, excepting a very few, are placed in pairs, the one to counteract and balance the other, when therefore at any time the equilibrium happens to be deſtroyed between antagoniſt muſcles, from an irregular and unequal ſupply of the proper enlivening fluids, then immediately violent and involuntary contractions will take place on the one part, while weakneſs and relaxation will ſucceed on the other.

As certain degrees of fulneſs and tenſion in the vaſcular ſyſtem are abſolutely neceſſary for enabling the muſcles to exert their powers properly, ſo when the veſſels at any time are ſuddenly emptied, and allowed to collapſe, not only general weakneſs will enſue, but very often ſpaſms take place, no doubt from the irregular relaxation of the motory fibres, and deſtruction of the equilibrium between the antagoniſt muſcles.

As we can know nothing of the mode of action reſpecting the immediate cauſes of this intenſeneſs of motion or irregular diſtribution, we are obliged to content ourſelves by making uſe of the term Stimulus, by which we mean every thing that, on being applied to the living ſolids, excites extraordinary motion. Theſe ſtimuli occaſion ſpaſm, either in the muſcular parts to which they are immediately applied, as for inſtance,

ſtance, the ſplinters of a fractured tibia will ſometimes raiſe convulſions in the muſcles of the leg, or they create the ſpaſm in muſcles that are diſtant, and to all appearance unconnected with the nerves where the ſtimulus is applied; as when worms or acrid matters, acting upon the nerves of the inteſtines, raiſe convulſions in the muſcles of the limbs and trunk of the body; or laſtly, ſtimuli may cauſe ſpaſms when applied to the nerves at their origin within the cranium, as when ſharp pieces of a fractured ſcull are forced in upon the brain.

Beſide things which act mechanically in conſequence of their ſharp angular points, as in the inſtances juſt now mentioned, there are other ſtimulating ſubſtances of various ſorts, which will be conſidered particularly in a future chapter, and which are preſumed to act chemically.

The conſequences of ſpaſm will be proportionally diſtreſſing and dangerous, according to its violence, extent, and duration; weakneſs in different degrees always enſues, proceeding, as we ſuppoſe, from the waſte and diſſipation of the ſubtile fluid.

Spaſm forms the diſtinguiſhing and predominant ſymptom in a certain order of diſeaſes; in ſome of which the muſcles remain in a ſtate of involuntary and violent contraction, in others they are agitated with alternate contractions and relaxations, in oppoſition to every effort of the will. Some of theſe diſeaſes are accompanied with

with pain, ſome are free from this diſtreſſing addition, and ſome are attended with total inſenſibility.

CHAP. IX.

Inſenſibility;—*Exceſs of Senſibility*;—*Delirium.*

INSENSIBILITY, like every other ſymptom, has its ſeveral degrees, which muſt be more or leſs alarming, according to the duration and violence, and according to the degree of diſorder in the vaſcular ſyſtem, which accompanies the privation of power in the nervous, particularly that part of it which is allotted for ſenſation; for here the reader is to obſerve, that there was a diſtinction propoſed with reſpect to the nerves; and that we inclined to follow the old phyſiologiſts, who allege that there is one ſet of nerves diſtributed in a particular manner to the muſcular fibres; while the other is beſtowed on the ſeveral organs of ſenſe.

Though it be impoſſible to obſerve any ſenſible difference between the two ſets of nerves, yet as the diſtinction enables us, in a more ſatisfactory manner, to make out the theory of the nervous ſymptoms, it will not be amiſs to retain it. Thus, weakneſs and ſpaſm may be held as morbid affections of the motory nerves; their actual cauſes being either remiſſneſs and ſuſpenſion, or intenſeneſs and irregularity, in regard to the diſtribution of the ſubtile fluid through this ſet of filaments; while, on this hypotheſis, pain and inſenſibility muſt

muſt be looked on as diſorders of the ſenſory nerves; pain, ariſing from an intenſeneſs, or exceſs of vibratory motion; and inſenſibility, from a remiſſneſs, or ſuſpenſion of the ſame: with reſpect to the inſenſibility of particular limbs or organs, we often can trace it to its ſource, and find it owing to a compreſſion of the nerves which lead to theſe affected parts, hindering the ſupply of enlivening fluid; but when the inſenſibility is general, we muſt ſuppoſe the fault to lie in the ſenſorium. In fact, it has appeared from diſſections, that collections of water in the ventricles, and between the foldings of the brain; blood extravaſated in the ſame places; depreſſion of the ſcull; and the enlargement or ſtuffing up of the blood-veſſels and ſinuſes, have, in different ſubjects, compreſſed the medullary part of the brain, and hindered the free diſtribution, or perhaps ſecretion, of the nervous fluid.

There are many caſes, however, where the loſs of ſenſation cannot be traced to ſuch evident ſources, and where it will be found to depend on ſome diſorder of the nerves beſtowed on the ſtomach and inteſtines, which are overloaded with different offenſive matters; ſo that here we muſt content ourſelves with recurring to the word Sympathy.

Inſenſibility will ſometimes be general, while the power of the muſcles appears to be not much impaired, particularly in a diſeaſe, which however is a very uncommon one, called the catalepſy: here the patients ſeem abſolutely dead with reſpect to the impreſſions of all external objects; while, nevertheleſs, the muſcles have power ſufficient to

ſupport

ſupport the weight of the body, and to preſerve the limbs in any particular poſture that the by-ſtanders chooſe to place them. But in general the motory nerves are diſordered, at the ſame time that the ſenſory become incapable of exerting their powers; and the muſcles either grow paralytic, or are agitated with convulſive motions. Thus it is in the apoplexy, the paraplegia, the hemiplegia, and the epilepſy, where inſenſibility is always accompanied with either atonia or ſpaſm; and in violent fevers the loſs of ſtrength, (which is one of the firſt ſymptoms) as they draw to a cloſe, and the veſſels of the brain come to be loaded and over-diſtended, is generally accompanied by different degrees of inſenſibility.

EXCESS of SENSIBILITY.—When even the moderate impreſſion of external objects gives uneaſineſs, the ſymptom is by ſome writers termed Erethiſm, though with more propriety it may be termed Hyperæſtheſia, or ſuperſenſation.

We are not to confound this ſpecies of morbid affection with pain, which the mind always feels, ſo as to refer to ſome particular place of the body, ſuppoſed to ſuffer violence: whereas hyperæſtheſia implies a general uneaſineſs throughout the whole frame.

We ſometimes meet with caſes wherein a particular organ of ſenſe ſhall be ſo affected, that it cannot bear the uſual impreſſions without uneaſineſs; and where the eye, for inſtance, ſhall be offended with a moderate degree of light, or the ear with moderate

rate degrees of ſound: beſides, in ſome conſtitutions, we may obſerve a certain degree of erethiſm, which ſeems natural, and where the body is remarkably ſuſceptible of the power of every thing that can ſtimulate or irritate, in the ſame manner as we often ſee degrees of inſenſibility peculiar to certain conſtitutions, wherein the powers of ſenſe, both internal and external, ſhall be remarkably dull and languid.

But when erethiſm is ſo prevalent as to riſe into a ſymptom, it is one of the moſt diſtreſſing that has yet been conſidered; and, accordingly, thoſe diſeaſes wherein it makes a part, unleſs it be but in an inferior degree, are of the moſt violent and fatal kind. In the hydrophobia, which ſeldom allows the patient to ſurvive ſo long as four days, erethiſm is one of the diſtinguiſhing and predominant ſymptoms; inferior degrees of it are met with in maniacal, hyſterical, and hypochondriacal caſes, and in nervous fevers.

As to the immediate cauſes, or thoſe changes in the ſtate of the corporeal frame, that give riſe to this increaſe of ſenſibility, there can be no abſurdity in ſaying, that it muſt be referred to a general intenſeneſs of motion, or general exceſs of vibration, throughout thoſe nerves which are deſtined for the purpoſes of ſenſation. And if it can be an admiſſible ſuppoſition, that there may be a ſuper-abundance of nervous fluid, we might aſſign that ſometimes as the cauſe of hyperæſtheſia, in like manner as weakneſs and inſenſibility might often be aſcribed to a deficiency of that ſame ſubtile matter.

If

If this ſymptom be of any conſiderable duration, it muſt neceſſarily be followed by delirium, which is the fifteenth and laſt that was enumerated.

DELIRIUM.—By the word Delirium we underſtand that general diſorder of the mental faculties, which, in oppoſition to the tenth condition of perfect health, hinders us from perceiving juſtly, and judging truly, while at the ſame time the powers of memory and imagination are confuſed and perverted.

There are different ſpecies and degrees of delirium, which it is unneceſſary to diſtinguiſh at preſent; what we are now to conſider, are thoſe changes in the corporeal frame, which may be held as the cauſes of this diſorder of the mental faculties; for though in caſes of pure delirium nothing appears amiſs with reſpect to the body, yet if the healthy exerciſe of the memory, imagination and judgment depends, as we preſume it does, on the equable, free, and moderate diſtribution and vibration of the ſubtile fluid, in that part of the nervous ſyſtem which conſtitutes the organs of internal ſenſe; when at any time this diſtribution and vibration ſhall become irregular, or is raiſed above the healthy rate, theſe faculties of the mind will be diſordered; for a ſimilar reaſon, that the moſt dexterous performer muſt ceaſe to have the power of producing either melody or harmony from a harpſichord, whoſe ſtrings are not well adjuſted or properly wound up and in tune. Such, we preſume, are the immediate or actual cauſes of delirium:

rium: as to the contingent or poſſible cauſes, ſome of them relate to the mind itſelf, abſtractly conſidered, and often ariſe from deep thinking, or intenſe application to abſtruſe ſtudies; violent paſſions, and other affections of the ſoul, frequently produce not only delirium, but alſo occaſion evident and permanent changes with regard even to the appearance of the external habit.

Delirium is a complaint extremely frequent in fevers; it is eſſential to an inflammation of the brain or meninges; and often makes the diſtinguiſhing and predominant ſymptom in a certain order of diſeaſes wherein there is not any mixture of fever.

* * * * * * * * * * *

Now that we have gone through the fifteen general ſymptoms, it appears that they are all immediately to be referred to diſordered motions either of the ſubtile fluid of the nerves, whoſe ſource is from the brain; or of the blood, and thoſe different humours which are ſeparated from it, and flow through all the variety of veſſels that have the heart for their center. In ſhort every one of them, unleſs perhaps exceſſive heat be ſometimes excepted, either depends ſolely on changes in the nervous ſyſtem, or is a nervous affection, mixed with diſorder of the vaſcular ſyſtem, and hence we may clearly underſtand, that as the motions of the nervous ſyſtem are totally exempt from any known hydraulic laws, how extremely fallacious, and we may venture to ſay, dangerous, all thoſe theories muſt be which are founded on meaſuring the diameters of veſſels, and calculating the force and velocity

velocity of the circulating fluids, ſince nothing is more apt to lead people into erroneous ſchemes of practice, than deductions drawn from ſuch falſe, or, at beſt, uncertain premiſes.

The medical art muſt not lay claim to mathematical certainty, and its profeſſors ſhould content themſelves to remain within the line by which their power is bounded.

CHAP. X.

Enumeration of partial or local Symptoms.

ALTHOUGH ſome one or more of the fifteen general ſymptoms will be found in all diſeaſes whatever, in certain degrees and proportions, yet there are many which take their character from the diſorder of ſome particular part, that can only be conſidered as a partial or local ſymptom; and therefore it is neceſſary that we ſhould underſtand the nature, cauſes and conſequences of the different ſpecies of morbid affection which ariſe from the diſorder.

(1.) Of particular faculties of the mind.
(2.) Of particular external ſenſes.
(3.) Of particular appetites.
(4.) Of particular ſecretions.
(5.) Of particular excretions, or diſcharges.
(6.) Of particular actions.
(7.) Which conſiſt in ſuperficial diſorders reſpecting the form and appearance of the external habit.

(8.) Which

(8.) Which disturb the situation and connection of different organic parts; and,

(9.) Which destroy the texture and consistence of the same.

As we shall have occasion hereafter, when we come to treat of partial or local diseases, to enter into a particular description and explanation of all the symptoms which spring from the disorders above-mentioned, there will be no necessity for doing much more at present than barely to enumerate them in the order they have been laid down.

(1.) And first, the morbid affections of particular faculties of the mind must relate to the memory, the imagination, and the judgment, as considered separately; for each of these faculties is observed to be liable to disorder, independent of the other two, and may be impaired, abolished or depraved; which shews that there are distinct places in the nervous system that are to be held as the organs of internal sense, on whose sound state the perfect exercise of the memory, imagination and judgment depends, as much as the sight, the smell, or the hearing, depend on the soundness of the organs severally appropriated to these external senses.

(2.) The five external senses, the touch, taste, smell, hearing, and sight, we every day see are liable to particular disorders; sometimes they become so acute as to be unable to bear the common impressions of the objects peculiar to each of them, without creating pain and distress; at other times they become dull, or are so encumbered or obstructed that they do not transmit the impressions with sufficient force; sometimes they are depraved so

ſo as to convey impreſſions diſſimilar to their objects; and laſtly, the organs are often rendered altogether incapable to receive or convey impreſſions.

To theſe four heads all the different ſymptoms peculiar to each of the five ſenſes may be referred; they are diſtinguiſhed by a multitude of different appellations, many of which we ſhall be obliged to mention hereafter, when we come to treat of thoſe diſeaſes wherein ſuch ſymptoms prevail, ſo as to give the name.

(3.) The third diviſion of particular ſymptoms relates to the different appetites, which are given to animals for the two important purpoſes of ſelf-preſervation, and continuing the ſpecies.

Theſe appetites, like the five external ſenſes, are liable to preternatural increaſe, to morbid diminution, to depravation, or to entire abolition; and ſo conſtitute a number of particular ſymptoms, alſo diſtinguiſhed by different appellations, ſome of which have been already treated of, and the others will be explained in the proper place.

(4.) The fourth diviſion includes the diſorders of particular ſecretions, which muſt be at leaſt four times as numerous as the ſecretions themſelves; for any particular gland may either ſeparate too much, or too little of the fluid peculiar to it; it may be ſo diſordered as not to ſeparate the proper humour, or it may be rendered altogether unfit for performing its office; in like manner, the humours of an entire claſs may be either

either preternaturally increaſed, preternaturally diminiſhed or ſuſpended, or they may be depraved, ſo as that watery humours may paſs into the organs for ſtraining off mucus; gelatinous lymph may paſs into the organs for ſeparating oil, mucus, or water; and oil into the organs for ſeparating mucus, water, or gelatinous lymph.

The ſecreted humours, as was formerly explained, are partly thrown out of the body as excrementitious; partly circulated and diſtributed, by means of various orders of tubes or veſſels, and partly depoſited for different lengths of time in particular receptacles, and in different parts of the cellular ſyſtem.

Of the excrementitious humours, by far the greateſt ſhare belong to the watery claſs, ſince the urine and the perſpirable matter are ranged under this head.

It is the peculiar nature of the organs deſtined to ſtrain off this ſuperfluous water, that they labour mutually for each other; ſince it is obſervable, that when there comes to be a diminution in regard to the ſecretion of watery humour in one place, it is always compenſated by the increaſe in another; hence the reaſon of the great diſcharge of pale and limpid urine in hyſterical paroxyſms, in conſequence of the extraordinary ſtricture of the cutaneous pores denying a paſſage to the matter of inſenſible perſpiration: hence the reaſon why cold bathing always increaſes the urinary diſcharge, and frequently that by ſtool;

and

and hence it is, that the urine in winter, or in cold weather, is more than perſpiration; while in ſummer, or in a warm atmoſphere, perſpiration is more, and urine leſs abundant.

Hence alſo the reaſon why the paſſions of fear, grief, or vexation, check the cutaneous diſcharges, and increaſe thoſe by ſtool and urine. While on the other hand, a diarrhœa, or an extraordinary diſcharge of urine, will be leſſened by directing the flow of watery humours to the ſurface of the body; on the ſame principles alſo we may check the violence of a ſalivation, by deriving the flow of ſaliva from the parotid glands, and inviting it to the ſkin, to the kidneys, or to the inteſtines.

Thus we may account for the extraordinary flow of ſaliva, and perceive the great advantages thereof in caſes where the other watery ſecretions are diminiſhed or interrupted, particularly in the ſmall-pox, where the greater part of the ſurface of the body is ſometimes ſo covered over as to hinder the perſpirable matter from paſſing off this way: here the patient may be preſerved by an extraordinary ſpitting; or if this ſhould receive a check, then the face and hands ſwell prodigiouſly, from the great load of watery humour thrown into the cellular interſtices of thoſe parts: when the ſpitting ſtops, and theſe ſwellings ſubſide, people converſant in practice very well know that death ſpeedily enſues.

There are caſes wherein it appears, that the ſecretion of watery humours in general is too abundant;

dant; that is to ſay, the watery part of the blood is too apt to part from the other conſtituent parts, and either run off by the different outlets, or tranſude into the larger cavities, or into the cellular ſyſtem, where it muſt accumulate, and form dropſies, if the abſorbent power of the lymphatics ſhould fail in any degree.

With regard to the mucous claſs of humours, which are chiefly deſtined to lubricate and defend different ſenſible membranes that are liable to ſuffer from acrid matters contained, or to come in contact with the external air, ſuch as the pulmonary veſicles, the whole inſide of the alimentary canal, the gall-bladder, the urinary paſſages, &c. theſe humours are ſometimes obſerved to flow in unuſual quantities to a particular part; and ſometimes the whole ſecretion is greatly increaſed, ſo as to ſtuff up the lungs and create cough and difficulty of breathing, load the ſtomach, and deſtroy the appetite; render the bile viſcid and inert, and even come off in conſiderable quantities with the urine; or ſometimes mix with the perſpirable matter, and give a clammineſs to the cutaneous diſcharges. On the other hand, in ſome caſes the ſecretion of this ſlimy fluid is diminiſhed, whence dryneſs and rigidity of the ſeveral parts where it ought to be furniſhed, cauſing dry cough, obſtinate coſtiveneſs, pain in making urine, &c. and ſometimes the ſecretion is depraved, the organs which naturally ought to ſeparate mucus being found to ſtrain off ſome other humour. As for inſtance, in the coryza, or common cold, the pores of the membranes which line the noſe, in-

ſtead of furniſhing a ſoft mucus, ouze out nothing but thin water, thus cauſing an excoriating ſoreneſs, frequent ſneezing, and a troubleſome cough, if the membranes about the larynx come to be affected in like manner; or even a ſtill more ſevere cough, with pain and difficulty of breathing, if the pulmonary veſicles, inſtead of being defended by a ſoft mucus, ſhall come to be perpetually ſtimulated by a flow of thin watery humour: if the mucous ſecretion in the alimentary canal comes to be depraved, and watery humour be poured out inſtead of ſoft mucus, then violent griping and purging will enſue; and if the ſtimulus be kept up, a quantity of gelatinous lymph, or of the red part of the blood, will paſs through the ſtrainers for mucus, and produce bloody ſtools.

In all places where lymphatic vapour is ſupplied, (which are all the larger cavities, and the whole cellular ſyſtem) we frequently obſerve accumulations of gelatinous lymph, which ſhew that this ſecretion has either been preternaturally increaſed, or that the abſorbents have loſt their power; for, when the ſecretion increaſes, the abſorbent power muſt likewiſe increaſe, otherwiſe a dropſy muſt inevitably take place.

But this ſecretion may be preternaturally diminiſhed, and the conſequence will be, a coheſion of different parts, which were before kept from adhering by the interpoſition of this fluid; or it may be depraved, and either an oily, watery, or mucous fluid may be poured out into the places where nothing ſhould be but gelatinous lymph;

or

or the pores may be ſo far enlarged as to ſuffer the red part of the blood to tranſude.

As to the oily humours, they alſo are ſometimes obſerved to paſs into the ſtrainers for other kinds; for inſtance, in the urinary paſſages, where it is frequently obſervable that the fat is mixed with the watery fluid ſeparated in the kidneys, having been melted down by the heat from violent exerciſe, or from the force of a fever. Sometimes it mixes with the perſpirable matter, and comes off in greaſy ſweats; and ſometimes it is poured into the cavities of the inteſtines, and goes off in a diarrhœa. In ſome conſtitutions there is an extraordinary ſecretion of oily matter, and a vaſt propenſity in it to ſeparate; often accumulating ſo as to form a real diſeaſe, which is ſo much the more deplorable, as there is perhaps no poſſibility of curing it. On the contrary, there are caſes wherein there ſeems to be little or no ſecretion of oily matter, and wherein all the places which ought to be naturally ſtored with oil are found replete with another kind of fluid. This is obſerved in the diſeaſe called the rickets, where the cells of the bones, inſtead of marrow, are found only to contain a gelatinous ſubſtance.

So far we have a view of the ſymptoms ariſing from diſorder of the ſecretions, as conſidered in the general way; but there are a multitude of particular ſymptoms, which ariſe from the diſorder of particular glands, all of which muſt produce different degrees of diſtreſs with

regard to the body in general, according to the degree of importance of the organ affected, and which will naturally occur to every perſon who knows the ſtructure and uſes of all the different parts wherein humours are ſeparated or ſtrained off: as for inſtance, the tears are one of the watery humours, and their uſe is to moiſten the ſurface of the eye, to preſerve its tranſparency, to render its motions (which are almoſt perpetual while we are awake) free and eaſy, and to prevent the eye-lids from growing to the ball of the eye while we are aſleep. Now, the ſecretion of the tears may be either preternaturally increaſed or preternaturally diminiſhed; it may be depraved or it may be altogether obſtructed. When preternaturally increaſed, the tears will run down the cheeks, and this running, if perpetual, produces a diſeaſe which the writers term Epiphora; this diſeaſe will alſo follow if the puncta lachrymalia be ſtopt; or if the duct which opens from the larymal ſac into the noſe be obſtructed.

If the tears be not ſupplied in ſufficient quantity to anſwer the ſeveral purpoſes juſt now mentioned, the eye will grow hot, dry, and painful; ulcerations, inflammations, and cicatrices, forming ſpecks, will enſue, producing different degrees of blindneſs. And if it ſhould ſo happen, that the tears ceaſe to be ſupplied, or are ſo depraved, that inſtead of a thin watery fluid, a thick and viſcid mucus ſhould be poured out; then the eye-lids would grow to the ball of the eye, and the parts would inflame, ſwell, and ulcerate. Or to give another example in regard to one of the particular

mucous

mucous ſecretions; we know that the urethra is naturally defended by a ſlimy fluid, which hinders the urine from irritating the ſenſible membrane that lines this canal. Now, if this mucus comes to be poured out in too great abundance on account of a relaxed ſtate of the pores which ſupply it, then there will follow a gleet, or perpetual diſcharge of ſlimy fluid, without pain; but if the mucus of the urethra comes to be depraved, and inſtead of being mild and viſcid, ſhall become acrid and thin, then the diſcharge will naturally produce pain, as the tender membrane is now left without its defence, and the urine, as it paſſes along, will irritate and inflame it.

Thus, from conſidering the uſe and ſtructure of the particular organ affected, we may always know what diſtreſs muſt enſue from diſorders of the ſecretion peculiar to it.

(5.) The fifth diviſion of particular ſymptoms comprehends the diſorders affecting the different diſcharges by ſtool, urine, and perſpiration, which may be either diminiſhed, ſuppreſſed, or preternaturally increaſed.

The periods for expulſion of the fæces are ſo different in different people, that it is impoſſible to determine abſtractly the natural and healthy intervals; ſo that we are always to take the concomitant ſymptoms into the account, before we determine that either coſtiveneſs or looſeneſs are morbid; for unleſs pain, ſickneſs, or loſs of ſtrength and appetite attend either the one or the other, we are not to look on a perſon who has but one

one ſtool in three or four days, or a perſon who has two or three in one day, as labouring under a diſeaſe, for theſe may be natural habits of body. The fæces alvinæ therefore may be frequently diſcharged, or they may be retained for ſeveral days without creating morbid diſtreſs.

Obſtinate coſtiveneſs ſometimes ariſes from want of irritability in the motory fibres of the larger inteſtines, but is more commonly owing to a deficiency or inactivity of the bile; this humour may become too viſcid and inert, or it may not be poured into the duodenum in ſufficient quantity, and this may proceed from obſtructions, either in regard to the ſecretion, or in reſpect of the paſſage from the liver along the proper ducts; theſe being ſtopt up with viſcid matter, or choaked by calculous concretions; or the ductus communis may be conſtricted by a ſpaſmodic diſorder of the muſcular fibres, either of the duct itſelf, or of the inteſtinum duodenum, ſo as to hinder the flow of bile from the gall-bladder into the gut.

Violent purging is generally owing to a redundancy of bile, or to its too great ſharpneſs and acrimony, ſtimulating the coats of the inteſtines not only to more frequent contractions, but likewiſe inviting a flow of mucous or watery humours; all other acrid or offenſive things, whether taken in the way of food, medicine, or poiſon, will create the like diſtreſſes, and bring on the like violent diſcharges, which muſt at leaſt produce weakneſs, bring on pain, and waſte the fleſhy parts of the body.

If

If the urine be not ſeparated in the kidneys, from a fault peculiar to theſe organs, and the ſaline and oily matters which ought to paſs off this way be left in the blood, a great variety of diſtreſs will enſue; namely, exceſſive heat, thirſt, nauſea, vomiting, want of reſt; convulſions, coma, and death inevitably, if the patient be not ſoon relieved. The urine in ſuch caſes has been found to force its way through the pores of the ſkin, producing fœtid ſweats, to run off by the inteſtines, to be thrown up from the ſtomach, or flow into the parotid and maxillary glands, or into thoſe of the breaſt, mixing itſelf with the ſaliva and with the milk.

If the urine, after having been ſeparated by the kidneys, cannot paſs into the bladder from a ſtone choaking up the ureter, or being conveyed to the bladder, be there retained, the like diſtreſſes will follow, attended with excruciating pain, from the violent diſtenſion of thoſe very ſenſible parts which are now concerned. But ſometimes the diſcharge of urine will be preternaturally increaſed, and flow off in ſuch quantities as to carry with it a great ſhare of nutritious matter, and conſequently produce a general weakneſs and waſting. Sometimes the ſphincter at the neck of the bladder will loſe its conſtrictive power, ſo that the urine ſhall perpetually drip away.

The cutaneous pores may be preternaturally relaxed; whence will proceed colliquative ſweating, or they may be too much conſtricted, ſo as to obſtruct perſpiration, and give riſe to a variety of

of complaints, particularly heavineſs of the head, ſtuffing of the cheſt, cough and hoarſeneſs; or the cutaneous diſcharge may be depraved, ſo as to yield ſweat with a diſagreeable ſmell, or tinged yellow or red.

(6.) We are now to conſider the diſorders which diſturb or impede the action of particular organs and inſtruments of motion, as theſe make the ſixth diviſion of local ſymptoms.

The organs of voice will be diſturbed in their action by every thing that hinders the aperture of the glottis from being freely contracted or dilated, ſo that the current of air which comes from the lungs ſhall not be properly directed in ſtriking againſt thoſe elaſtic cartilages, whoſe vibrations modulate the voice.

The voice will likewiſe be proportionally impaired, according as the cartilages of the glottis ſhall loſe their elaſticity, becoming ſo ſoft that they cannot vibrate; or if they become too rigid, ſo as not to yield readily to the force of the muſcular fibres; or, again, if they ſhall happen to be ſo covered with mucus, that their motions are thereby impeded, or their power of vibration taken away, in the ſame manner as we may deſtroy the proper vibration in the ſtrings of a violin, by the application of greaſe.

Hence we may readily ſee, that the voice may be impaired or deſtroyed in a great variety of ways; as from ſpaſmodic contraction, or paralytic relaxation of the muſcles of the glottis; from a flow

flow of humours to these parts, either relaxing the cartilages, or covering them over with slime and mucus; from too great rigidity, as happens in extreme old age; or when the parts about the larynx are greatly distended by an inflammation; or when they suffer actual loss of substance from ulceration.

The voice also must be affected by all disorders whatever, that impede the action of the lungs, and hinder the air from being either received or expelled with sufficient ease and freedom.

The action of the lungs is frequently disturbed by coughing, sneezing, involuntary laughter, or hiccup.

The uses of coughing and sneezing in the animal œconomy are too obvious to require being pointed out; but when from any particular cause, either of these actions becomes so violent and so frequent, as to create pain, difficulty of breathing, restlessness, or any other of the fifteen species of general distress (as already explained), then they are to be held as morbid, and become symptoms in different diseases.

The causes producing an irritation in the pulmonary vesicles, or in the upper part of the trachea, and about the larynx, which throws the muscles concerned in respiration into action, so as to force out the air from the lungs, by quick and repeated contractions, and raise a cough, are so very numerous, that they shall be reserved till we come to treat of diseases wherein a cough is the distinguishing symptom.

But

But with regard to ſneezing, (which ſeldom becomes ſo violent or continues ſo long as to require being conſidered as a diſeaſe) it will be brought on when any thing acrid falls particularly on the membranes of the noſe, as in the caſe of a common cold, wherein thoſe membranes are deprived of their mild and ſoftening mucus, and ſtimulated by a flow of ſharp watery humour. In like manner, while the ſmall-pox or meaſles are juſt on the point of appearing, the membranes of the noſe are often ſtimulated by the acrid matter, and violent ſneezing precedes the eruption.

Sneezing will likewiſe be brought on by the affection of nerves at a diſtance, from ſympathy with thoſe beſtowed on the muſcles concerned in the action of reſpiration; and this ſymptom is one of thoſe we meet with in hyſteric diſeaſes. In like manner, in theſe diſeaſes we often ſee involuntary and violent laughter brought on by the ſame kind of ſympathetic affection of theſe muſcles.

The hiccup conſiſts in a quick and ſudden deſcent of the diaphragm, which drags downward the œſophagus; and this being connected with the larynx, it likewiſe is ſuddenly pulled down, and in the ſame inſtant of time the aperture of the glottis is ſtraitened; whence the air, puſhing into the vacuum through the narrow chink, occaſions a ſingular kind of noiſe.

Theſe are the immediate cauſes of hiccup, but the remote cauſes are generally an overfulneſs, or ſome irritating matter in the ſtomach.

This

This ſymptom ſeldom becomes ſo troubleſome as to require particular regard; though now and then it is found to continue very obſtinately for whole days and nights, and it is then generally owing to great quantities of flatus in the ſtomach or inteſtines, or to an infarction of ſome of the larger abdominal viſcera, eſpecially the liver.

The action of ſwallowing depends on the ſoundneſs of ſuch a number of little muſcles, that it may be diſordered in a variety of ways; theſe muſcles may be convulſed, or they may loſe their power, and become paralytic; they may be inflamed or ulcerated, or the different parts about the fauces may be ſtuffed up and ſwelled from ſuch a number of ſources, that it would be improper to enter into the conſideration at preſent.

The action of the ſtomach is often diſordered by vomiting, occaſioned, for the moſt part, by acrid or offenſive matters taken into it; though ſometimes we meet with ſevere and long-continued vomitings, which are owing to affections of nerves at a diſtance from the ſtomach, or from ſtimuli acting on the brain itſelf. It is of the greateſt importance in practice to be able to diſtinguiſh theſe ſympathetic vomitings, from thoſe which are idiopathic, or occaſioned by offenſive matter actually lodged in the ſtomach.

The action of the heart is often diſordered by a palpitation; and ſometimes this is a merely nervous affection; the heart, conſidered as a muſcle, being diſordered by a convulſive motion, either from ſympathetic connection, or from irritating ſubſtances

ſubſtances contained in the pericardium, and immediately applied: at other times a palpitation of the heart is owing to ſome ſtoppage, with reſpect to the free paſſage of the blood through its cavities, from polypi ſtuffing up the large blood-veſſels; from aneuriſm of the aörta; dilatation of the ventricles, auricles, or venous ſinuſes; oſſification of the valves or great blood veſſels; dropſy of the pericardium; accumulation of fat, or other maleconformation of the heart and parts immediately connected with it.

The like cauſes often produce a ſpaſm of the heart, which if not immediately removed muſt deſtroy life: accordingly many ſudden deaths are owing to this ſpaſmodic affection.

The diſorders of particular muſcles appertaining to the limbs are to be referred either to ſpaſm, when the fibres contract themſelves involuntarily, or to paralyſis, when they have not the natural degrees of power.

(7.) The ſeventh diviſion of partial ſymptoms contains thoſe which diſorder the form and appearance of the external habit.

Sometimes the whole external form and appearance are affected, either from an entire ſwelling of the body, or from univerſal waſte.

Theſe general enlargements are occaſioned either from an exceſs of fat, termed Polyſarcia; from an accumulation of ſerous or watery fluid in the cellular ſyſtem, called Leucophlegmatia, and Anaſarca, or from elaſtic air filling up the ſame cavities, named Emphyſema.

The

The terms for waſting of the body are Marcor, Maraſmus, and Atrophia, which are conſequent upon a great number of diſeaſes; though we ſometimes meet with caſes wherein it is difficult to trace the waſting of the body to its ſource, and where it muſt be conſidered as a primary ſymptom.

With reſpect to colour and complexion, there is no abſolute ſtandard; and we are always to form our judgment from the other circumſtances which attend; for if no one ſpecies of morbid diſtreſs or affection accompany uncommon appearances on the ſurface of the body, we can only look on theſe appearances as ſo many ſpecies of deformity.

Thus, for inſtance, extreme paleneſs, unleſs it be accompanied with ſome inability or diſtreſſing ſenſation, cannot well be reckoned morbid, becauſe it may be natural to that particular conſtitution. But if a perſon be extremely pale, and at the ſame time languid, weak, and deficient as to appetite, we may then look on the paleneſs as a ſymptom, and conclude that the ſubcutaneous veſſels are either not ſufficiently ſupplied, or that they are filled with poor and watery fluids.

The ſkin is likewiſe liable to turn yellow, or even of a duſky green, and in the end almoſt black; namely, in caſes where the bile has been ſtopped for a length of time in its paſſage from the gall-bladder into the duodenum.

In habits where the texture of the blood is injured, and it loſes its natural viſcidity, the red particles eſcape through the pores in the arteries, which

which ought to ſuffer only pellucid lymph to paſs, and then the ſkin is ſometimes found of a livid caſt; but more frequently only interſperſed with ſpots of the ſame hue, and of different ſizes. This is peculiar to diſeaſes wherein the fluids are in a putreſcent ſtate, whether accompanied with a fever, or whether there be no particular diſturbance in regard to the general circulation.

There are moreover a great variety of eruptions which appear on the ſkin; ſome of them unconnected with any degree of fever, and others, which are always preceded, and very often accompanied by the febrile commotion: to the former head belong the various ſpecies of leproſy, diſtinguiſhed among writers by ſeveral different appellations; the ſcabies alſo, or common itch; many ſymptoms of the lues venerea; the herpes; and a variety of other puſtules and pimples, which authors expreſs by different names.

The eruptions which are always preceded, and for the moſt part accompanied with a degree of fever, are, the ſmall-pox, the meaſles, the miliary, and the petechiæ or purples; to which add the eryſipelas, and the ſcarlet fever; where, in the firſt inſtance, ſome particular part (very often the face) is inflamed, and conſiderably ſwelled; and in the latter caſe, the red broad ſtreaks are ſpread all over the body; the aphthæ, which are little whitiſh ſloughs, or ulcerations about the lips and inſide of the mouth; and the eſſera, which are eruptions like the ſtinging of nettles, very frequent in the warm climates, are likewiſe to be referred to the ſymptoms belonging to the ſkin.

Particular

Particular parts of the body are ſwelled by accumulations of blood, of ſerum, of oily or purulent matter, either contained in cyſts, or circumſcribed within a ſmall compaſs, and then the ſwelling is round and prominent, or more diffuſed throughout the cellular interſtices, when the ſwelling is flat and extended.

Some of theſe tumours are attended with exceſſive heat, pain, and redneſs, while others are indolent, give little or no pain, and are neither diſcoloured nor hot.

(8.) Oftentimes ſwellings are included in the eighth diviſion of local ſymptoms, when they are occaſioned by the change of ſituation and connection of different parts; as when ſome of the inteſtines, the omentum, and other contents of the abdomen, puſh out in different places; theſe, in general, are termed herniæ or ruptures, and are diſtinguiſhed by different names.

The uterus likewiſe is liable to fall down into the vagina, and ſometimes even to appear externally; and the internal membrane of the vagina is ſometimes ſo relaxed and enlarged as to puſh out; in like manner, the inteſtinum rectum ſometimes protrudes either from a relaxation of that part of the meſentery which ſuſtains the colon, or from an enlargement and relaxation of its internal membrane.

Not only the ſoft parts of the body are thus liable to ſlip from their natural ſituations, but the bones alſo are frequently diſlocated, and produce different degrees

degrees of pain, ſwelling, and diſtreſs, according to the nature of the particular part affected.

(9.) The texture of the ſoft parts may be deſtroyed, either by ſome ſudden external violence, wounding, lacerating, bruiſing, or burning; (whence all the different ſpecies of wounds, contuſions, and burns, producing different degrees of diſtreſs and danger, according to the nature and importance of the part ſo injured;) or their texture may be deſtroyed gradually by the force of ſome internal acrimony, corroding and diſſolving the ſolid ſubſtance, and producing all the various kinds and degrees of ulceration.

In like manner the bones may be cruſhed, fractured, and fiſſured, in a variety of ways by external injuries; or their ſubſtance may be corroded and diſſolved by ſlow degrees, and by the power of ſome ſharp humour, producing all the various kinds and degrees of caries.

Or the conſiſtence of the bones may be ſo changed, that they ſhall become ſoft and pliable like a cartilage, or even degenerate into a ſubſtance like fleſh, or coagulated blood; and on the other hand, they are ſometimes ſeen to grow too dry and brittle, ſo as to be liable to break on every trifling occaſion.

With regard to all the fleſhy parts, their conſiſtence is alſo liable to be changed; ſometimes ſo that they ſhall become hard or callous in different degrees, or (though very rarely ſeen) even as hard, and of a ſubſtance ſimilar to that of the bones; but more frequently the ſoft parts are diſſolved and

and degenerate into fungus, or are melted down into purulent matter, and form abſceſſes of various ſorts.

Thus have we finiſhed the enumeration of local ſymptoms; but as there are ſome complaints which are either peculiar to one ſex, or which are only met with during the ſtate of infancy, it is neceſſary that theſe ſhould be alſo noticed in order to have a complete view of all the ſymptoms, which are either general or particular.

CHAP. XI.

Sexual Symptoms, and ſuch as are peculiar to the Infant State.

THE ſymptoms which are to be conſidered as ſexual depend on the different formation of the organs, which diſtinguiſh male and female, and on certain circumſtances peculiar to each ſex.

Symptoms peculiar to men.

Thoſe complaints which are proper to men, conſiſt in diſorders reſpecting,

1. The ſeparation, retention or emiſſion of the ſemen.
2. The teſtes and ſcrotum.
3. The penis.

If the ſemen be not ſeparated from the blood the venereal appetite will rarely be felt; if this fluid be too long retained and accumulated, a ſwelling of the teſtes or of the ſpermatic chord may enſue, or

the diſorder termed Satyriaſis; but if it be too frequently or too profuſely diſcharged, a weakneſs of the ſeminal veſſels will ſucceed, and there will be a gleet (gonorrhœa ſimplex) or perpetual dripping from the urethra of a whitiſh mucus; beſides a number of more general ſymptoms, ſuch as pain in the loins, loſs of ſtrength and appetite, waſting of the fleſh, and oftentimes failure of the underſtanding.

The teſtes are liable to inflammation and ſuppuration, producing what is termed Hernia Humoralis; or they ſometimes degenerate into a hard, lumpy, indolent ſwelling, called Sarcocele; or the veſſels leading to them become varicoſe, and produce a Cirſocele.

The ſcrotum is frequently diſtended with a watery fluid, when the diſeaſe is termed Hydrocele; or it often receives the omentum and inteſtines, when they fall through the rings of the abdominal muſcles, and thus conſtitute the Hernia Scrotalis, or Oſcheocele.

The penis is often affected with the venereal ſymptom, termed a Chordee, which is an extremely painful erection, and at the ſame time a contraction of the frenum bowing down the glans; and likewiſe with a collection of watery fluid between the folds of the prepuce termed Chryſtalline; all theſe, together with Dyſuria, and what are vulgarly called Chancres, viz. little ſerpiginous and painful ulcers on the glans and prepuce, are frequent attendants on the gonorrhœa virulenta, which is a diſcharge from the urethra, of a purulent and ichorous

ous matter, the well known conſequence of a contagious virus.

Symptoms peculiar to women.

The ſymptoms or complaints which are peculiar to women conſiſt in diſorders, reſpecting,

1. The menſtrual diſcharge.
2. Pregnancy; and,
3. Lying-in.

And in local affections of the ovaria, uterus, vagina, and os externum.

When the menſtrual diſcharge is diminiſhed, or altogether ſuſpended, then languor, ſickneſs, ſwelling of the abdomen, pains in the hypogaſtrium, corruption of the general maſs of fluids, hæmorrhages from different parts, and a variety of other complaints are apt to follow, ſome of which are ſo irregular, and ſo different in different ſubjects, that it is not eaſy to arrange them in ſyſtematic order. On the other hand, a profuſion of the menſtrual diſcharge will produce weakneſs and pain in the back, loſs of appetite, waſting, paleneſs, flatulency, ſenſation of cold, and divers anomalous complaints, which are uſually denominated hyſterical ſymptoms.

When the menſtrual diſcharge is depraved, and inſtead of florid blood, a thin, poor, and watery fluid is thrown off; or when ſerous, mucous or acrid humours perpetually ouze out, the like ſymptoms, for the moſt part, enſue, with thoſe that follow the immoderate profuſion. And theſe different fluors proceed ſometimes from mere laxity of the

veſſels, and ſometimes from a corruption of the fluids, exulcerating and corroding their containing ſolids.

Sterility is the uſual conſequence of the different diſorders which regard the increaſe, diminution, or depravation of the menſtrual diſcharge.

Pregnancy is always attended at leaſt in the firſt three or four months, with a variety of ſymptoms, for the moſt part ſimilar to thoſe which are the conſequence of obſtructed menſtrua. Such as nauſea, vomiting, oppreſſion, and loſs of appetite.

Abortion may enſue from a variety of cauſes; but in order to underſtand the theory of it, we are to conſider, that the placenta and uterus mutually anſwer to each other, as they extend and increaſe in ſize and capacity; the uterus is enlarged, and the fluids conveyed to it by the power of the mother's heart; the placenta grows, and its veſſels are diſtended by the power of the heart in the fœtus; hence the neceſſity that there ſhould be a proportionate equilibrium between theſe two forces: for if the uterus enlarges faſter than the placenta grows, then the uterus will be ſeparated from the placenta; while, on the other hand, if the placenta ſhould grow faſter than the uterus enlarges, then the placenta will be detached from the uterus: thus, we ſee how it happens, that too great a fulneſs on the part of the mother, whereby the veſſels of the uterus are apt to be overloaded, ſo as to make it enlarge faſter than the placenta grows, often proves the cauſe of abortion, and how ſerviceable bleeding muſt be in order to prevent it:

thus

thus alſo we can readily aſſign the reaſon why ſudden fear or continued grief, which conſtrict the veſſels at the circumference, and throw the maſs of fluids in upon the center, ſhould ſo often cauſe abortion. And thus we may underſtand why the death of the fœtus, and conſequent ſtoppage to the growth of the placenta, muſt ſo ſoon be followed by a ſeparation.

As to external violences, whether blows, falls, or bruiſes, they may, from the mere ſhock, ſeparate and deſtroy the union between the uterus and placenta, and ſo cauſe abortion or untimely birth.

The ſymptoms during the time of labour are ſome of them natural and beneficial; others are to be deemed morbid and detrimental.

It is of great importance to practitioners in midwifery to know, and conſtantly bear in mind, that the action of the diaphragm and abdominal muſcles is by no means ſufficient to empty the womb, and that the expulſion of its contents depends entirely on the contractile power and force of its muſcular fibres; from not knowing, or not attending to this circumſtance, accoucheurs have often fallen into fatal miſtakes reſpecting the delivery both of the child and of the placenta. What are termed true labour-pains are the reſult of repeated contractions of theſe uterine fibres, which perſons experienced in this branch of practice know well how to diſtinguiſh from the falſe pains, that are nothing more than ſpaſmodic affections of the abdominal muſcles; the efforts from theſe falſe

falſe pains appear to force down the child, but are never found ſufficient to expel it.

During labour, cramps in the muſcles of the lower extremities are often found to give diſtreſs; convulſions alſo (though not frequent) ſeize women during labour, and are extremely dangerous.

If the placenta be detached from the uterus, either wholly or in part, before the expulſion of the child, a proportionate flow of blood or flooding will enſue, whence fainting, convulſions and death, unleſs immediate aſſiſtance be had. And here it is of the greateſt importance that the accoucheur ſhould recollect, that it is the contraction of the uterus which forces out the child; for without adverting to this circumſtance, the woman's life may be brought into imminent danger, as will be explained in its proper place.

A flooding alſo is apt to ſucceed after delivery, if the placenta be forced off without waiting for the contraction of the uterus, or if the fibres of the womb be ſo far debilitated, that they have not a ſufficient degree of contractile power.

After-pains, as they are termed, are a common conſequence of delivery. Sometimes theſe are occaſioned by acrid matters pent up in the alimentary canal, (which are generally the cauſe of the falſe pains before the birth); but moſt commonly after-pains are owing to ſome clots of blood, or to a part of the membranes, or perhaps placenta, which happen to break off, and are left in the uterus.

On

On the third day, ſometimes ſooner, ſeldom later, the breaſts grow hard and painful, and different degrees of fever ariſe, which continue until the milk flows into its proper channels, and then the fever goes off in a plentiful perſpiration. But ſometimes the milk-fever will run very high, and continue longer; and in the courſe of it, miliary eruptions will make their appearance. A particular ſpecies of fever alſo, termed by way of eminence the Puerperal Fever, ſometimes happens, and if not ſpeedily and properly attended to, is apt to terminate fatally.

Miliary eruptions are often ſeen in lying-in women without a fever, and then there is little danger to be apprehended from them, whereas thoſe which ſucceed a fever are always to be ſuſpected.

The milk gradually diſappears if the ſecretion be not increaſed by the ſuction of the infant, ſo that by the end of the third week after lying-in, it is, for the moſt part, entirely gone; but ſometimes it ſtagnates in the breaſts, and produces hardneſs, ſwelling, inflammation, and abſceſs.

The foregoing may be conſidered as general diſorders; thoſe which are local, reſpect the internal, and external parts proper to the ſex.

Of the internal parts liable to diſorder, there are (1.) The ovaria; wherein there is ſometimes found a collection of watery fluid, forming a dropſy; and at other times theſe bodies are enlarged by a ſchirrous ſwelling.

(2.) The

(2.) The uterus: water is ſometimes confined and collected in the uterus, and diſtends it ſo as to be miſtaken for pregnancy: flatus alſo has been known to be ſhut up in this cavity; ſolid, fleſhy, fatty, or even boney ſubſtances, have been obſerved to grow in the uterus, and to ſwell it to a large ſize. It is a part very liable to ſchirrhus and cancer, and when ſo affected, is ſometimes ſo far enlarged as to preſs on the neck of the bladder, and occaſion a ſtoppage of urine, and on the rectum, hindering the fæces from paſſing off. A ſtoppage of urine in the early months of pregnancy is ſometimes brought on by a retroverſion of the uterus; the fundus falling backwards and preſſing on the rectum, while the os tincæ turned upwards compreſſes the neck of the bladder. The uterus is ſubject to prolapſus, falls down into the vagina, and ſometimes appears without the os externum: there have alſo been inſtances where the uterus has been inverted by forcibly dragging away the placenta.

(3.) The vagina is alſo liable to prolapſus, when its inner membrane is ſo relaxed that it falls down, and protrudes in like manner as the rectum does in the procidentia ani. Polypi or fungous fleſhy excreſcences ſometimes grow in the vagina; diſcharges of mucous, watery, or purulent fluids frequently come from relaxed veſſels, and form ulcerations in this place, as well as from the cavity of the uterus. The paſſage to the uterus is ſometimes cloſed up, either by a preternatural thickneſs and extenſion of the hymen, or from the ſides of the vagina

or labia pudendi growing together: if this ſtoppage happens to ſubjects who are in a ſtate of menſtruation, all the variety of complaints which follow upon obſtructions of this natural diſcharge will be ſuperadded to the pain and ſwelling of the abdomen.

The external parts wherein we often find diſorder are (1.) The labia pudendi: theſe may become the ſeat of a dropſy, from a ſtoppage in the lymphatic veins which abſorb the lymph from the cellular interſtices of theſe parts; and the ſwelling is ſometimes found ſo large, and the quantity of ſerous fluid accumulated ſo great as to require being let out by puncture. This complaint may be called hydrops labiorum. The ſame parts are often inflamed or ulcerated from a flow of ſharp humour, moſt commonly the ſyphilitic virus; and they are alſo liable to another kind of ſwelling from an accident that ſometimes happens during labour, when ſome of the blood veſſels beſtowed on the vagina and parts which conſtitute the os externum are ruptured, and the extravaſated blood being accumulated in the cells of the tela celluloſa immediately raiſes a monſtrous ſwelling of the labia and perinæum, which increaſes rapidly, until the load of coagulated blood comes to be ſo great as to burſt through the integuments: this we term Ecchymoma labiorum.

(2.) The nymphæ are ſometimes found ſo large, or are otherwiſe ſo affected as to require amputation, or the application of different remedies to allay heat or heal up ulceration.

(3.) The

(3.) The hymen, as already mentioned, may be imperforate, and of ſuch a firm texture as to retain the menſtrual blood; whence the neceſſity for a ſurgical operation.

(4.) The breaſts, liable to inflammation, abſceſs, ſchirrhus, or cancer.

Symptoms peculiar to Infants.

The ſkin of new-born infants, in two or three days, is very commonly tinged with a deep yellow, as is ſuppoſed, from the bile's regurgitating, and mixing with the blood; this humour being prevented from paſſing into the duodenum, probably from a load of viſcid ſlime choaking up the aperture of the ductus communis, or poſſibly ſome of the meconium or fæces of the infant may be abſorbed and carried into the blood, and give that yellow tinge, which, however, generally wears off in a week or two, without ſeeming to have produced any ill effect. A red pimply eruption, termed the Red Gum, is another appearance peculiar to new-born infants, and generally holds more or leſs for the firſt four or five weeks.

It ſometimes happens that the natural paſſages are found cloſed up, eſpecially in boys, where the opening of the prepuce is apt to be ſo glued together as to require immediate circumciſion.

Griping and green ſtools are ſymptoms to which infants are extremely ſubject; they are likewiſe liable to aphthæ, vulgarly termed the Thruſh, when a number of little whitiſh ſloughs break

break out all over the tongue and inſide of the mouth, and ſeem to ſpread themſelves down along the alimentary canal till they appear about the anus, in little ulcers, which ſometimes end in a mortification. Convulſions are a frequent conſequence of the accumulation of acrid matters in the bowels of infants, and carry off multitudes during this tender ſtate.

Dentition generally commences about the ſixth month, and goes on to excite various ſpecies of diſtreſs till infants are between two and three years old, ſuch as pain, heat, reſtleſſneſs, griping, cough, and convulſions.

Within this period, children are liable to the rickets, the bones loſe their ſolidity, and grow ſpongy towards the joints, where there appear protuberances of various ſizes, particularly at the wriſts, and at the places where the ribs articulate with the ſternum. This is a very frequent diſeaſe, eſpecially in large cities.

Swelling and hardneſs of the abdomen generally accompany theſe ſwellings of the joints, and likewiſe periodical heats, with loſs of ſtrength and waſting of the fleſh.

Eruptions of various kinds are apt to appear on the ſkin of young infants, and diſcharges of purulent matter from behind the ears, and ſometimes from the internal part of the ear. When children are paſt the dangers of dentition, they then begin to be ſubject to worms; and in conſequence of theſe, are often afflicted with fevers, or different ſpaſmodic diſeaſes.

To

To the foregoing account of ſymptoms we ſhall here ſubjoin a table, which gives a connected view of the whole, and will ſerve as a recapitulation.

General Table of Symptoms.

A ſymptom is a ſimple morbid affection; or, in other words, a ſingle complaint of ſome diſtreſſing ſenſation, inability, or local diſorder.

Symptoms are diſtinguiſhed into general, local, ſexual, and infantile.

General Symptoms are,

1. Senſation of exceſſive heat.
2. Senſation of exceſſive cold.
3. Sickneſs.
4. Exceſſive thirſt.
5. Pain.
6. Itching.
7. Reſtleſſneſs.
8. Somnolency.
9. Oppreſſion.
10. Difficulty of breathing.
11. Weakneſs.
12. Spaſm.
13. Inſenſibility.
14. Exceſs of ſenſibility.
15. Delirium.

Local ſymptoms conſiſt in the morbid affection of,

I. Particular organs of internal ſenſe, whence enſue diſorders of the different faculties of the mind;

Memory,

Memory,
Imagination,
Judgment.

II. Particular organs of external ſenſe; whence diſorders of the different ſenſes, of

Seeing,
Hearing,
Smelling,
Taſting,
Touching.

III. Particular organs on which the different appetites depend; whence diſorders reſpecting the deſires for

Food,
Venery.

IV. Particular glands or ſecretory organs; whence diſorders of the different ſecretions,

Watery,
Gelatinous,
Mucous,
Oily.

V. Particular excretory organs; whence diſorders reſpecting the different diſcharges by

Stool,
Urine,
Perſpiration.

VI. Particular motory organs; whence diſorders reſpecting the

Voice,
Manducation,
Deglutition.

Deglutition.
Action of the Stomach,
——————— Lungs,
——————— Heart,
——————— Limbs.

VII. External habit; whence all the variety of ſuperficial or external complaints, ſuch as

Swelling,
Waſting,
Diſcoloration,
Eruption,
Ulceration.

VIII. Different organic parts, which are liable to ſlip, fall, or be forced from their natural ſituations and connections; whence

Herniæ,
Prolapſus and procidentiæ,
Luxations.

IX. Solutions of continuity, either of the ſoft or hard parts, whether by external injuries or from internal cauſes; whence

Wounds,
Contuſions,
Burns and ſcalds,
Ulcers,
Fractures,
Caries.

Sexual ſymptoms peculiar to males, conſiſt in diſorders of the

Seminal veſſels;
Teſtes,
Penis.

Thoſe

Thoſe which are peculiar to the female ſex, conſiſt in diſorders of the

Uterus and ovaria,
Vagina and os externum.

And in the various complaints attendant upon

Menſtruation,
Pregnancy,
Parturition,
Nurſing.

Infantile ſymptoms are but few, being thoſe morbid appearances, defects, and complaints, which are only ſeen or met with in new-born infants, or until they are paſt teething; ſuch as the eruption vulgarly termed Red Gum, being tongue-tied, imperforate, &c.

The different local ſymptoms, as well as the ſexual, and thoſe peculiar to the infant ſtate, are, for the moſt part, diſtinguiſhed by particular appellations, and theſe names, as will appear hereafter, are uſed to expreſs the ſeveral local, ſexual, and infantile diſeaſes, wherein ſuch ſymptoms are found remarkably conſpicuous or predominant.

A

METHODICAL INTRODUCTION TO THE THEORY OF THE ART OF MEDICINE.

BOOK III.

NOSOLOGY; OR, GENERAL HISTORY OF DISEASES.

CHAP. I.

Symptoms diſtinguiſhed into ordinary, acceſſory, and extraordinary.

WE now proceed to conſider ſymptoms as combined together, in all the various aſſemblages which conſtitute different diſeaſes. This part of the medical ſyſtem is intitled Noſology.

As the immediate cauſes of all the fifteen general ſymptoms are reducible to intenſeneſs, remiſſneſs, irregularity, or ſuſpenſion of motion, in the nervous or vaſcular ſyſtems, it follows, that certain aſſemblages of theſe ſymptoms muſt unavoidably run together, and afflict the body in combination.

Thus, for inſtance, exceſſive heat, violent thirſt, and inability to ſleep, may all ſpring from one ſource; namely, intenſeneſs of motion in the vaſcular ſyſtem; and therefore we ſhall very often meet with an aſſemblage of theſe ſymptoms.

If this exceſſive heat, and the other two ſymptoms, do not ſoon ſubſide, there will be an acceſſion of diſtreſs, and more ſymptoms will be added, particularly ſickneſs, loſs of ſtrength, difficulty of breathing, pain and delirium; and if theſe all perſiſt, ſo that from the continued increaſe of heat, and violent agitation of the fluids, the ſecretions ſhall be diſturbed and perverted, the healthy craſis of the blood deſtroyed, and groſs particles forced into cavities deſtined for tranſmitting only thoſe which are more ſubtile; and alſo that the pores of the arteries allow the contained fluids to tranſude, then we ſhall ſee a number of additional ſymptoms and appearances, ſuch as ſpaſms, perpetual doſing, inſenſibility, eruptions on the ſkin, &c. The aſſemblage here mentioned comprehends thoſe ſymptoms which we often meet with in fevers, and includes both the ordinary ſymptoms which are eſſential to the diſeaſe, and the acceſſory, which will naturally ſucceed, if the cauſes that firſt produced the fever continue to prevail, as all of them flow from ſimilar changes in the animal motions.

But beſide the train of ſymptoms above-mentioned, which may be all traced to the ſame ſources, we ſometimes meet with unuſual, or extraordinary ſymptoms, that cannot be ſo accounted for; as for inſtance, vomiting, or purging, which may ariſe independent of the actual cauſes of the fever: hence the

the neceſſity for diſtinguiſhing ſymptoms into ordinary, acceſſory, and extraordinary.

Ordinary ſymptoms are thoſe which are eſſential to the diſeaſe, and form its diſtinguiſhing characteriſtics, whereby we know that diſeaſe from every other ſpecies.

Acceſſory ſymptoms are ſuch as naturally ſupervene if the ſame efficient cauſes continue in force, neceſſarily creating an increaſe of diſtreſs and danger; theſe acceſſory ſymptoms may in good meaſure be foreſeen, by recollecting the theories of the general ſymptoms, and calling to mind thoſe changes in the ſtate of the animal motions which give riſe to them.

But as to the extraordinary ſymptoms which are not ſo neceſſarily connected with the eſſential and diſtinguiſhing ſymptoms, and which either may or may not happen, it is not to be expected that they can always be foretold.

Theſe diſtinctions, and this method of arranging ſymptoms, are not only neceſſary for enabling us to deſcribe diſeaſes, but they are alſo of uſe in forming indications for the method of treatment. For example, a patient in a fever, among other ſymptoms which are eſſential to the diſeaſe, is particularly diſtreſſed by inability to ſleep, and remarkably anxious to be relieved from this complaint: now, this ſymptom, as flowing from the ſame ſource with all the others, cannot be removed unleſs they alſo give way; and therefore we ſhould act in vain if we gave opium in order to procure ſleep, and did not rather purſue ſuch methods as would calm the

intenſeneſs of motion, and remove the obſtacles to free circulation which give riſe to the other ſymptoms as well as to the reſtleſſneſs; but if this patient happened to be ſeized with vomiting, which is an extraordinary ſymptom, then we might attempt to give relief without regarding the others or thinking of their general ſources.

Thus we ſee, that the ordinary and the acceſſory ſymptoms are all to be treated as one connected group, whereas the extraordinary may often be regarded ſingly, and without attending to the general cauſes of the diſeaſe.

CHAP. II.

Diſeaſes arranged according to the Syſtematic Method, into Claſſes, Orders, Genera, and Species.

THE diſeaſes, or different combinations of ſymptoms, which have been already obſerved, and deſcribed by medical writers, are ſo extremely numerous, that unleſs they be arranged according to ſome regular plan, we ſhall never be able to retain their deſcriptions, nor remember how they are to be treated.

Different writers have adopted different ſchemes; but, the moſt uſeful and ſatisfactory of all, is that which was firſt propoſed by Sydenham.

By this, which is termed the Syſtematic Method, the hiſtories of diſeaſes, like the ſubjects of natural hiſtory,

hiſtory, are arranged into claſſes, orders, genera, and ſpecies.

The claſſes are marked by certain ſymptoms and circumſtances, which are common to each; the orders all agree in having the ſame marks with the claſs to which they belong, together with ſome additional peculiar to the order: the genera have all the marks and circumſtances of the claſs, and order; and, beſides, have ſome which diſtinguiſh the genus; and the ſpecies have all the marks and tokens of claſs, order, and genus; with the ſtill further addition of ſymptoms or circumſtances, which give the ſpecific character.

There are people who, probably, have not been at the trouble to make themſelves maſters of it, and yet pretend to decry the ſyſtematic way of arranging the hiſtories of diſeaſes; but if ſuch as have capacity to underſtand it, will take the pains of examining, they will ſee that this method is more ſatisfactory than any that has yet been adopted, and tends to eſtabliſh practice on the moſt rational foundations; ſince, by bringing thoſe diſeaſes together, which agree in the greater number of circumſtances, and demand nearly ſimilar remedies, it ſhews, that though there may be great variety in the names, there needs not much in the methods of treatment.

This, as hath been already mentioned, is the ſcheme which Sydenham recommends in the preface to his juſtly celebrated works, where he inſiſts ſtrongly on the neceſſity and advantages of "*reducing diſeaſes to certain and determinate ſpecies*" *with*

" *with the ſame exactneſs that we ſee it done by bo-*
" *tanic writers in their hiſtories of plants.*" The great Boerhaave alſo, and learned Gaubius, have both expreſſed their warmeſt approbation of this ſyſtematic method; but rather deſpaired of it's ever being carried into execution, on account of the infinite patience and labour that it muſt require.

If the immediate cauſes of the fifteen general ſymptoms were not ſo few, the diſeaſes which might reſult from their poſſible combination with each other, and with all the variety of local complaints, would amount to an immenſe number indeed; but ſince intenſeneſs or remiſſneſs, irregularity or ſuſpenſion, of the motions in either nervous or vaſcular ſyſtem, give riſe to every one of the ſymptoms which are found, more or leſs, in all diſeaſes whatever, ſome of the fifteen, as depending on ſimilar circumſtances, muſt unavoidably concur, and always run together in the ſame aſſemblage; and hence it is, that all the diſeaſes which afflict the human body, can be reduced to a few orders and very moderate number of genera.

As to diſtinctions into ſpecies and varieties, they may be extended to many hundreds; but, as will hereafter appear, ſo many ſubdiviſions are not abſolutely neceſſary for practice, though they are indiſpenſibly ſo, whenever it is attempted to write hiſtories of diſeaſes.

" In writing a hiſtory of diſeaſes, the manifeſt
" and natural appearances muſt be noted with the
" utmoſt accuracy: for, is there a ſhorter, or in-
" deed is there any other way of coming at the
" morbific

" morbific cauſes which we are to encounter, or of " diſcovering the curative indications, than by a " certain and diſtinct perception of the peculiar " ſymptoms ? even the ſmalleſt circumſtance is of " uſe to both theſe purpoſes." Such are the words of Sydenham, who adds, that " the principal rea- " ſon of our being yet deſtitute of an accurate hiſ- " tory of diſeaſes, proceeds from a general ſuppo- " ſition that they are no more than the confuſed " and irregular operations of diſordered and de- " bilitated nature, and conſequently that it is a " fruitleſs labour to endeavour to give a juſt detail " of them."

The notion here complained of is undoubtedly falſe; for though it be allowed, that caſes do ſometimes occur, with ſuch a complication of anomalous ſymptoms, that it ſhall be hard to diſtinguiſh the ſpecies, or perhaps even the genus, yet this is far from being true with reſpect to diſeaſes in general; and it is hoped that the following pages will ſhew not only the poſſibility, but likewiſe the utility of the ſyſtematic way of arrangement.

Four ſchemes upon this plan, have been already publiſhed, by as many celebrated authors, Sauvages, Linnæus, Vogel, and Cullen; and each of them ſomewhat different.

A fault common to the three firſt is, that they have made too many genera, and have claſſed with diſeaſes not only many ſpecies of ſimple morbid affection, or mere ſymptoms, but alſo a number of complaints not accompanied with any diſtreſs or inability,

ability, and which at moſt can only be conſidered as blemiſhes or deformities.

This is more eſpecially true of Vogel and Sauvages; the laſt, who has the honour of having actually carried Sydenham's ſcheme into execution, makes an extravagant number of diſtinctions, not leſs than two thouſand, and for the moſt part conſiders that as a ſpecies which ought rather to be called a variety; his Noſologia Methodica is nevertheleſs a work of incredible labour, and infinite merit, and ſuch as ought to be in the hands of every practitioner, that he may occaſionally turn to it, as a lawyer does to his Viner's abridgment, for a particular deſcription of caſes ſimilar to thoſe which actually occur in the courſe of his buſineſs.

The four ſchemes above-mentioned, (which are publiſhed together in one volume by Dr. Cullen under the title of "Synopſis Noſologiæ Methodicæ,") are the foundation of that which is to follow.

All the diſeaſes to which the human body is liable, ſhall be divided into four claſſes.

I. Univerſal diſeaſes.
II. Local diſeaſes.
III. Sexual diſeaſes.
IV. Infantile diſeaſes.

Each of theſe claſſes ſhall be diſtinguiſhed into orders; the orders into genera; the genera into ſpecies; and when ſuch minuteneſs appears to be of real uſe, the ſpecies into varieties, according to the

the circumſtances which vary the ſtate or appearance of the diſeaſe.

By univerſal diſeaſes are meant all thoſe which are not only common to every age and ſex, but wherein there is alſo ſuch an aſſemblage of ſome of the fifteen general ſymptoms, that they predominate above the other partial or local ſymptoms, and form the principal part of the diſtreſs; thus, a fever and epilepſy are univerſal diſeaſes, becauſe they ſeize not only perſons of all ages and ſexes, but are alſo made up of general ſymptoms.

By local or partial diſeaſes are to be underſtood all thoſe leſs alarming and leſs diſtreſſing diſtempers, which, though they always include certain degrees or proportions of ſome of the fifteen general ſymptoms, yet the predominant ſymptom, or moſt conſpicuous part of the diſeaſe conſiſts in the diſorder of a particular organ or part of the body; as, for inſtance, a cough, or a looſeneſs, are only to be conſidered as partial or local diſeaſes, provided they be not accompanied with ſuch degrees of pain, weakneſs, ſickneſs, &c. as ſhall obſcure the particular diſorder in the action or excretion.

In ſhort, every diſeaſe wherein the general ſymptoms (treated of in the preceding book, from the IIId to the IXth chapter inclufive) are obſerved to prevail, is to be claſſed with univerſal diſeaſes; and all thoſe wherein any of the local ſymptoms (treated of in the Xth chapter) ſhall predominate, are to be claſſed with local diſeaſes.

The

The third and fourth claſſes contain diſeaſes which might be included in the firſt and ſecond, if it were not for many circumſtances that are peculiar, and which, for the moſt part, demand particular methods of treatment; for theſe reaſons, it will be of greater uſe to practitioners to claſs the ſexual and the infantile diſeaſes by themſelves, than mix them, as the four authors above-mentioned have done, with the univerſal and local.

The firſt claſs will be readily diſtinguiſhed into its ſeveral orders, by calling to mind the immediate cauſes of the fifteen general ſymptoms.

Some of theſe depend on intenſeneſs and irregularity of motion in the vaſcular ſyſtem, joined indeed to diſorder of the nervous ſyſtem; and theſe are, principally, exceſſive heat, thirſt, ſickneſs, weakneſs, and reſtleſſneſs; theſe ſymptoms naturally run together, or ſucceed each other, and when they do ſo, they conſtitute Fevers, which being the moſt frequent of all diſeaſes, ſhall be conſidered as the firſt order.

In fevers, the intenſeneſs of motion in reſpect of the vaſcular ſyſtem is evident; and it is alſo plain, that there is diſorder of the nervous ſyſtem joined to this intenſeneſs; but as there is a ſet of diſeaſes wherein we have high degrees of diſturbance in the vaſcular ſyſtem, and yet, in general, no very evident diſorder of the nervous ſyſtem, (at leaſt in the commencement) it is neceſſary to diſtinguiſh theſe from fevers, and conſider them as another order, under the title of Inflammations.

Nearly

Nearly allied to fevers and inflammations are the Fluxes or preternatural diſcharges of the animal fluids; theſe diſcharges are either conſtantly preceded or attended by ſome of the ſymptoms peculiar to fevers and inflammations; and hence they are placed next in ſucceſſion, as the third order of univerſal diſeaſes.

In the three foregoing orders, diſturbance in the vaſcular ſyſtem is apparently the principal cauſe of the diſtreſs; but there are many diſeaſes wherein there is little or no apparent diſorder with reſpect to the circulation of the groſs fluids, and therefore theſe muſt be referred to the nervous ſyſtem, as conſiſting of thoſe ſymptoms which are preſumed to ariſe from the intenſeneſs, remiſſneſs, irregularity or ſuſpenſion of the motions in this branch of the living ſolids.

In ſome of theſe, pain is the predominant ſymptom, and gives the diſtinguiſhing character; theſe are therefore intitled Painful diſeaſes, and make up the fourth order.

In others of theſe nervous diſeaſes, ſpaſm is the prevailing ſymptom; whence they are denominated Spaſmodic, and compoſe the fifth order.

The oppoſites to ſpaſmodic and painful diſeaſes are thoſe wherein ſomnolency, weakneſs, and inſenſibility, form the diſtinctions, and which depend on a diminution or privation of the powers of ſenſe and motion: hence the ſixth order includes palſies, faintings, and all the ſpecies of ſleepy diſeaſes, under the general denomination of Weakneſſes and Privations.

As

As the free action of the lungs is indiſpenſibly neceſſary to the enjoyment of health, thoſe diſeaſes wherein difficulty of breathing appears to be the prevailing diſtreſs, muſt be conſidered as a ſeventh order, under the title of Aſthmatic diſeaſes.

Thoſe caſes wherein the faculties of the mind are more eſpecially diſordered, and where delirium is the predominant ſymptom, independent of any febrile diſturbance, ſhall be thrown together as the eighth order, under the denomination of Mental diſeaſes.

In all the foregoing orders, the motions of the nervous and vaſcular ſyſtems being evidently diſturbed, the methods of treatment are chiefly to be directed to the regulation of theſe diſordered motions; but ſince there are ſome diſeaſes which conſiſt in diſorders of the groſs fluids, and require peculiar management, different from what is requiſite in diſeaſes that conſiſt chiefly in affections of the living ſolids, there is a neceſſity for making a ninth order to comprehend them, which are termed Cachexies, or humoral diſeaſes; theſe ſhew themſelves by changes in the external habit, which is diſcoloured, ſwelled, emaciated, ulcerated, or disfigured by different ſpecies of cutaneous foulneſs.

So much for the firſt claſs, and its ſubordinate orders.

The ſecond claſs ſhall be divided into eight orders.

The

The firſt order will comprehend the diſeaſes of the different mental faculties, memory, imagination, and judgment.

The ſecond will include thoſe diſorders which affect the different external ſenſes, ſeeing, hearing, taſting, ſmelling, feeling.

The third, thoſe of the different appetites.

The fourth, thoſe of the different ſecretions and excretions.

The fifth, thoſe which diſturb the different actions of ſwallowing, ſpeaking, breathing, walking.

The ſixth order ſhall contain all thoſe which affect the form and appearance of the external habit, without being accompanied with notable degrees of general inability or morbid diſtreſs, and which are therefore not included in the ninth order of univerſal diſeaſes.

The ſeventh order ſhall contain the diſeaſes which conſiſt in the diſlocation of different organic parts, including all the ſpecies of herniæ, prolapſus and luxation.

And the eighth, thoſe which conſiſt in the ſolution of continuity, or in the deſtruction of texture, whether of the ſoft or hard parts.

The third claſs, under the title of Sexual Diſeaſes, ſhall contain all thoſe that depend either on the different ſtructure of the organs of generation, or on the particular circumſtances which are peculiar to each ſex, and may be divided into four orders :

1. General

I. General
II. Local } Diſeaſes, peculiar to males.

III. General
IV. Local } Diſeaſes, peculiar to females.

The diſeaſes peculiar to men are but few, and thoſe chiefly local; but the diſeaſes peculiar to the female ſex are pretty numerous; ſuch of them as may be deemed general, are combinations of the fifteen general ſymptoms, and proceed from diſorders reſpecting menſtruation, pregnancy, parturition, and nurſing; the local diſeaſes of girls and women conſiſt in diſorders of the ovaria, uterus, vagina, and os externum.

The fourth claſs, under the title of Infantile Diſeaſes, will contain thoſe which are only met with in children until they are paſt teething, and ſhall alſo be diſtinguiſhed into general and local.

By this ſcheme of arrangement, we may include every ſpecies of complaint or diſeaſe that can require the aid of either phyſician, ſurgeon, or accoucheur, as will appear from the following table:

GENERAL TABLE OF DISEASES.

A diſeaſe is an aſſemblage of morbid affections; or, in other words, a compound of diſtreſſing ſenſations, or of inabilities to exerciſe the natural functions, oftentimes accompanied with evident diſorder of particular organs or parts of the body.

Diſeaſes are divided into four claſſes:

CLASS

CLASS I.

UNIVERSAL DISEASES.

In theſe, ſome one or more of the fifteen general ſymptoms predominate throughout the whole or greateſt part of the diſeaſe; it conſiſts of nine orders:

Order I. *Fevers.* The diſtinguiſhing ſymptoms are exceſſive heat, thirſt, loſs of appetite, weakneſs, and inability to ſleep.

Order II. *Inflammations.* The diſtinguiſhing ſymptoms are, fixed pain, exceſſive heat, thirſt, and inability to ſleep; when the part where the inflammation is ſeated can be ſeen, there is redneſs and ſwelling.

Order III. *Fluxes.* In theſe there is a preternatural diſcharge either of blood or of ſome ſecreted fluid, accompanied with weakneſs, loſs of appetite, and ſometimes pain.

Order IV. *Painful Diſeaſes.* In theſe there is acute pain, without the diſtinguiſhing circumſtances and ſigns of a true inflammation, and without a ſettled fever or preternatural diſcharge.

Order V. *Spaſmodic Diſeaſes.* The diſtinguiſhing ſymptom is ſpaſm, accompanied ſometimes with pain and ſometimes with inſenſibility.

Order

Order VI. *Weakneſſes and Privations.* The diſtinguiſhing ſymptoms are, ſomnolency, loſs of ſtrength, and inſenſibility.

Order VII. *Aſthmatic Diſeaſes.* In theſe the diſtinguiſhing ſymptom is difficulty of breathing.

Order VIII. *Mental Diſeaſes.* In theſe the memory, imagination, and judgment, are all confuſed and perverted, without the diſtinguiſhing ſigns of fever or inflammation.

Order IX. *Cachexies, or Humoral Diſeaſes.* In theſe either waſting or tumefaction of the whole or different parts of the body, cutaneous eruption, diſcolouring or ulceration, are attended with weakneſs, loſs of appetite, pain, or ſome other general ſymptom.

CLASS II.

LOCAL DISEASES.

In theſe, ſome one or more of the local ſymptoms predominate throughout the whole or greateſt part of the diſeaſe; it conſiſts of eight orders:

Order I. *Diſeaſes of particular Internal Senſes.* In theſe, either the memory, imagination, or judgment, is impaired, depraved, or aboliſhed.

Order

Order II. *Diſeaſes of particular External Senſes.* In theſe, either the ſight, hearing, ſmell, taſte, or ſenſe of touching, is rendered too acute, depraved, impaired, or aboliſhed.

Order III. *Diſeaſes of particular Appetites.* In theſe, the deſires for food or venery are either too keen, depraved, impaired, or aboliſhed.

Order IV. *Diſeaſes of particular Secretions and Excretions.* In theſe there is either a preternatural increaſe or ſuppreſſion of ſome particular ſecretion or natural diſcharge.

Order V. *Diſeaſes of particular Inſtruments of Motion*; impeding the different actions of ſwallowing, ſpeaking, breathing, walking, &c.

Order VI. *External or ſuperficial Diſeaſes*, which ſhew themſelves in ſwellings, waſting, diſcolouring, or cutaneous eruption, without predominant degrees of ſickneſs, weakneſs, or other general ſymptom.

Order VII. *Diſlocations of different Organic Parts*, which ſlip or fall, or are forced from their natural ſituations and connections.

Order VIII. *Solutions of Continuity, and Deſtruction of Texture*, in either the ſoft or hard parts, whether by external violence or from internal cauſes.

CLASS III.

SEXUAL DISEASES.

The diſtinctions of this claſs are taken either from local diſorders depending on the different ſtructure of the organs which mark the ſexes, or on circumſtances that are peculiar to each; it conſiſts of four orders:

Order I. *General Diſeaſes peculiar only to the Male Sex.* Theſe are aſſemblages of general ſymptoms, ariſing from diſorders which can only take place in the male ſex.

Order II. *Local Diſeaſes peculiar only to the Male Sex.* Theſe conſiſt of local complaints ariſing from diſorders of the organs of generation, proper to males.

Order III. *General Diſeaſes peculiar to the Female Sex.* Theſe are aſſemblages of general ſymptoms, ariſing from diſorders which can only take place in girls or women.

Order IV. *Local Diſeaſes peculiar to the Female Sex.* Theſe conſiſt of local diſorders in the organs of generation proper to women.

CLASS IV.

INFANTILE DISEASES.

Theſe are diſtinguiſhed by ſymptoms and appearances which do not occur but during the infant ſtate; it conſiſts of two orders:

Order

Order I. *General Diſeaſes peculiar to Infants.* Theſe are aſſemblages of general ſymptoms, ariſing from circumſtances peculiar to children before and during the time of dentition.

Order II. *Local Diſeaſes peculiar to Infants.* Theſe conſiſt of morbid appearances and local ſymptoms, which are only obſerved in infants newly born, or within the period of teething.

CHAP. III.

Of Fevers in general, their Riſe and Progreſs.

HAVING thus laid down the general ſcheme for arranging the hiſtories of diſeaſes, let us now proceed to explain the nature of the ſeveral orders, and divide them into genera, ſo that when we come to the practical part there may be nothing to engage the reader's attention, ſave pure deſcriptions of the different ſpecies, and the methods of treatment, free from all theoretic diſquiſition.

Fevers being the moſt frequent of all diſeaſes, are properly ſet down as the firſt order.

Fevers are not only the moſt frequent of all diſeaſes, but they are alſo the moſt complex; for in the moſt ſimple ſpecies that we ſhall meet with, there is a combination at leaſt of four, if not five, of the general ſymptoms.

As theſe ſymptoms are not always the ſame in every ſpecies of fever, it neceſſarily follows, that, in giving a general idea of fevers, we muſt be ſuppoſed to deſcribe thoſe of the more regular and leſs complicated ſort.

The ſymptoms of a fever ſometimes invade by degrees, and we perceive the growing diſtemper come on, day after day, until, at length, the whole frame ſhall be ſo diſordered, as to render the perſon affected incapable of exerciſing the natural powers of mind and body; while at other times the diſeaſe ſhall make its attack ſo ſuddenly, and with ſuch violence, as to throw the patient down all at once.

When a fever comes on gradually, the firſt complaints are moſtly the following; languor, weakneſs, and a general wearineſs, with ſoreneſs of the fleſh, ſuch as people feel after ſevere exerciſe or labour; pain likewiſe, and heavineſs of the head, loſs of appetite or naufea, with clammineſs of the mouth; then, after ſome time, come on exceſſive heat, violent thirſt, and inability to ſleep, perhaps without any previous ſenſation of exceſſive cold, or with only ſlight and tranſient ſhiverings.

But when the fever attacks ſuddenly, it always begins with an uneaſy ſenſation of exceſſive cold, accompanied with weakneſs, and loſs of appetite; frequently the cold is attended with rigor or ſhivering, with oppreſſion about the præcordia, and with naufea or vomiting.

If the reader will but call to mind what was ſaid when we endeavoured to inveſtigate the nature of the different ſpecies of ſimple morbid affection, he will

will readily underſtand that this ſenſation of exceſſive cold, and the other ſymptoms which neceſſarily attend it, muſt ſoon be ſucceeded by exceſſive heat, and a train of other concomitant ſymptoms: for it was then ſhewn, that the ſenſation of exceſſive cold ariſes either from ſpaſmodic conſtriction, or from viſcid particles obſtructing the paſſage through the extremities of the fineſt arteries, thus interrupting the circulation through the extreme parts of the vaſcular ſyſtem, and throwing a load of fluids in upon the center. But as this interruption cannot poſſibly ſubſiſt long without putting an end to life, nature immediately endeavours to reſtore freedom, and put the ſtagnating fluids again in motion; hence the heart, which is irritated by the unuſual load of blood thrown back upon it, makes more numerous and ſtronger contractions, drives on the general maſs of fluids through the open part of the vaſcular ſyſtem with rapidity, violence, and irregularity, in conſequence of which the ſenſation of exceſſive cold is changed into that of exceſſive heat, accompanied ſometimes with pain in different places, but always with thirſt and reſtleſſneſs.

Thus we ſee, that in a fever which comes on ſuddenly there is a ſucceſſive train of at leaſt ſix of the general ſymptoms, namely, exceſſive cold, which ſoon changes to exceſſive heat, weakneſs, loſs of appetite, thirſt, and inability to ſleep.

As theſe are the ordinary or eſſential ſymptoms, and met with in the moſt ſimple ſpecies of fever, they are to be held as the diſtinguiſhing ſigns of this order of diſeaſes; and may enable us to give this

this general definition, that a fever is a combination of exceſſive heat, thirſt, loſs of appetite, weakneſs, and inability to ſleep.

The more complex ſpecies of fevers are accompanied even from the very firſt attack, with a greater number and variety of ſymptoms, ſuch as vomiting, violent pain in different places, or perhaps ſtupor and delirium; but theſe we ſhall take no notice of at preſent, ſince all that we now purpoſe is to give the reader a general idea of fevers.

Let us now endeavour to trace the progreſs of theſe ſymptoms, which are thus eſſential to a regular fever.

It is ſufficiently evident, that the diſorder here ariſes either from an irritation immediately communicated, and acting on the heart and arterial ſyſtem; or, from a ſpaſmodic conſtriction, or obſtruction by lentor, which firſt cauſe a remiſſneſs or interruption in the circulation through the veſſels at the circumference, and then an irregularity and intenſeneſs of motion.

The acrid matters which are capable of raiſing this irritation are of various kinds, but if they do not paſs beyond the common maſs of groſs fluids contained in the vaſcular ſyſtem, ſo as to affect the nerves, and through them produce ſome degree of ſpaſmodic conſtriction, theſe morbific matters will not then give riſe to a fever of any long duration; for the acrid particles in thoſe caſes will either be aſſimilated in a ſhort time, ſo as to ceaſe from making any unuſual impreſſion on the living ſolids, or they

they will paſs off along with ſome of the excrementitious humours.

Therefore, in fevers of any conſiderable continuance, we may always conclude that there is not only an irritation of the vaſcular ſyſtem, cauſing irregularity and intenſeneſs of motion, but that there is alſo at the ſame time ſome degree of ſpaſmodic conſtriction ſtraitening the diameters of the veſſels at the circumference, or other obſtacle to the paſſage of the fluids, which ought to flow freely and equably through them.

If theſe obſtacles ſpeedily give way, the freedom and equability of the circulation will be ſoon reſtored; the ſkin will grow moiſt and ſoft, and a ſweat breaking out, together with a plentiful diſcharge of urine, the heat and thirſt will be carried off; ſleep reſtored; the appetite return; and no complaint, excepting ſome degree of weakneſs, will remain.

But if the obſtacles ſhould continue, the circulation cannot poſſibly be carried on with either freedom or equability; the ſecretions will be perverted, and the febrile conteſt between the force exerted from the center, and the reſiſtance made from the circumference, being thus kept up, the eſſential ſymptoms will not only increaſe in violence, and grow more diſtreſſing, but they will ſoon be followed by others which may be held as acceſſory, ſuch as violent pain, great oppreſſion, difficulty of breathing, and delirium; and theſe ſymptoms already mentioned as eſſential and acceſſory will be ſucceeded by ſuch as are ſtill more deſtructive and alarming; a coma, for inſtance, or perpetual doſing, ſpaſms,

ſpaſms, inſenſibility, cold ſweats, and in the end death, unleſs things take a favourable turn, and the offenſive matters which keep up the irritation and conſtriction ſhall either be ſubdued or aſſimilated, or be diſcharged and thrown out from the circulation by hæmorrhage, ſweat, ſtool, urine, expectoration, cutaneous eruption, or critical abſceſs.

In tracing the progreſs of a fever, we may obſerve that there are two remarkable ſtages; the cold fit, which begins the attack, and the heat which neceſſarily ſucceeds it. The ſucceſſion of theſe, and the ſolution or criſis, make up what is called the period of a fever, which is of different duration in different fevers.

In ſome fevers there is but one period; in others there are ſeveral; and theſe ſucceſſive attacks come on at different intervals, attended with different appearances, which enable us to diſtinguiſh the order of fevers into genera.

But before we go into theſe diſtinctions, it will be proper to inquire concerning the general cauſes of fevers; for if we can but once obtain a true notion of what creates all the diſtreſs and diſorder, we ſhall then be in a fair way of knowing what to adminiſter as the moſt ſucceſsful means of relief.

CHAP.

CHAP. IV.

Of the general Cauſes of Fevers.

WE may venture to lay it down, that the actual or immediate cauſes of a fever, ſuch as hath been juſt now deſcribed, are intenſeneſs of motion, exerted from the center of the vaſcular ſyſtem, and a preternatural degree of ſtraitneſs or obſtruction in the veſſels, making reſiſtance from the circumference.

The ſtagnation in the veſſels at the circumference, is evident in the beginning, from the languor and oppreſſion, paleneſs of the cheeks and lips, coldneſs and dryneſs of the ſkin, and livid colour of the extremities; and afterwards when the heat becomes diſtreſſing, it is plain that the obſtacles have not given way from the dryneſs of the ſkin, violent thirſt, and tranſparent urine made only in ſmall quantities; from the coſtiveneſs; the drying up of iſſues, or other running-ſores; and from a continuance of the oppreſſive weight or anxiety.

The intenſeneſs of motion in the vaſcular ſyſtem is ſufficiently evident from the increaſed heat, and from the pulſe, which is always found quicker, and for the moſt part much ſtronger than in the natural and healthy ſtate, when the circulation is carried on with freedom and moderation.

The immediate cauſe of this intenſeneſs is an irritation of the heart and arteries, from the application

cation of ſomewhat that ſtimulates them to more frequent and ſtronger contractions; but as to the obſtacles which keep up the unuſual degree of reſiſtance at the circumference, we muſt look for their ſources in the nervous ſyſtem; and therefore though the intenſeneſs of motion in the heart and blood-veſſels be ſo evident from the increaſe of heat, and from the pulſe; and though this intenſeneſs ſeems to comprehend the whole of the fever, which, if we were to look no further, might be held as a diſorder merely of the vaſcular ſyſtem, independent of the nervous; yet, when we conſider the nature of ſpaſmodic conſtriction, as ariſing from an affection of the nerves, we immediately underſtand that fevers conſiſt in the diſorder of both ſyſtems: at leaſt all fevers whoſe periods are of any conſiderable duration or violence. As to the ſlighter and more tranſient feveriſh attacks, ſuch as frequently enſue after a debauch, or from too violent exerciſe, or a ſlight cold, they appear to ariſe from nothing but mere irritation of the vaſcular ſyſtem alone, excluſive of any nervous diſorder; and for the moſt part ceaſe within the ſpace of two or three days, being attended with nothing more than the eſſential or ordinary ſymptoms, and even theſe in ſlight degrees.

But it is to be obſerved, with reſpect to theſe two conjunct cauſes, that ſometimes the one predominates, and ſometimes the other; that is, in ſome caſes more of the diſorder ſhall be owing to intenſeneſs of motion, or increaſe of force and velocity in the circulating fluids, than to nervous affection; and, on the other hand, in ſome fevers the

the ſymptoms appear to ariſe more from nervous affection, than they do from increaſe of force and velocity.

In caſes where the fever depends moſt on the increaſe of force and velocity, the pulſe is quick, full and ſtrong, the inflammatory heat, thirſt, and dryneſs, very diſtreſſing.

In ſuch as depend moſt on nervous affection, the pulſe is rather weak, ſmall, and depreſſed; the heat, thirſt, and dryneſs, not ſo evident, nor diſtreſſing; but the nauſea, oppreſſion, and weakneſs, very remarkable.

Having now eſtabliſhed the immediate or actual cauſes of a fever, let us go on to inquire into the remote or poſſible cauſes.

Theſe may be various, but the moſt powerful are reducible to the following heads: cold; infectious miaſmata; paſſions of the mind; retention of excrementitious, or other offenſive matters in the ſtomach, inteſtines, and other receptacles.

The ſudden application of cold muſt neceſſarily conſtringe the pores on the ſurface of the body, and hinder the diſſipation of thoſe effete, and ſuperabundant particles of fluid that ought to paſs off this way; hence theſe being driven back, and retained in the general maſs, will be exceedingly apt to produce combinations among the inſenſible particles, which in time may come to diſorder the motions of the living ſolids.

If

If the organs of ſecretion did not mutually aſſiſt and labour for each other, a ſtoppage of perſpiration could ſcarcely ever fail of producing a fever, or ſome other diſeaſe; but happily things are ſo ordered, that, for the moſt part, the deficiency of diſcharge from the ſkin is compenſated by the increaſe of urine, or evacution by ſtool.

It is ſufficiently obvious, that ſudden tranſitions from heat and moiſture in the atmoſphere, to cold and dryneſs, muſt be much more apt to check perſpiration, than when the change is more gradual, and leſs contrariety in the circumſtances attending it: and hence the frequency of people's falling into fevers, in conſequence of their going ſuddenly from cloſe rooms, heated with crouds, into the cold and open air.

Whether there be ſuch things as frigorific particles, which, abounding in a cold atmoſphere, are taken into the body, and lay a foundation for diſeaſes, is more than we ſhall pretend to determine; ſome ingenious men have thought that there are ſuch: but, though the exiſtence of theſe may admit of diſpute, yet there is no doubt to be made of the reality of what are uſually termed Miaſmata; certain particles which float in the atmoſphere, and being received into the body, frequently prove the ſource of fevers, and ſome other diſeaſes. No body pretends to deſcribe theſe miaſmata, or to ſay what they are like, our ideas being imperfect of the ways in which they are generated. Some kinds of them ſeem to ariſe from ſubſtances in a ſtate of putrefaction; others from crouds

crouds of people being pent up in cloſe places; others again are of a ſpecific nature, and only have the power of producing certain ſpecies of diſeaſes; and what is extremely remarkable, that ſpecific kind, only once in the ſame ſubject; it appearing that the fluids are incapable of being again diſturbed or infected by the ſame ſpecies of morbific matter.

Certain paſſions of the mind, particularly grief and fear, have ſuch an effect as to check perſpiration, prevent the ſecretions, and hinder the paſſing off of ſuperfluous or excrementitious matters; hence theſe paſſions act in the ſame way as cold does when applied ſuddenly, are accompanied with the very ſame ſenſations and appearances; and, by deſtroying the healthy craſis of the animal fluids, frequently prove the ſource of fevers.

The retention alſo of acrid or excrementitious matters, particularly in the ſtomach or inteſtines, may produce ſimilar effects: worms likewiſe, and the different ſpecies of ſaburra, may not only ſtimulate the nerves in theſe very ſenſible membranous parts, but very often the offenſive fluid matters enter the circulation, and either immediately irritate the heart and arterial ſyſtem, producing intenſeneſs of motion and ſlight fever; or, paſſing farther, at length come to affect even the nervous ſyſtem, ſo as to bring on ſpaſmodic conſtriction, and thus prove the ſource of a true fever, of longer duration, and accompanied with a greater number and variety of ſymptoms.

The

The ſuffering of iſſues to cloſe up, the drying of old ulcers, and other cutaneous foulneſs, by the imprudent application of aſtringents, or other repellent ſubſtances, unleſs great care be taken to ſubſtitute ſome other diſcharge, ſeldom fail to lay the foundation of a fever, or ſome other diſeaſe; and ſo does the ſudden change of climate, or general habit and courſe of living: theſe then are the principal ſources and antecedents, or what may be termed the remote or poſſible cauſes of a fever, which however are not by any means to be underſtood as producing fevers in every perſon where they happen to have place, but only in ſuch as have that peculiar, though inexplicable, diſpoſition of body, which favours the action of the morbific matter. The knowledge, therefore, of theſe poſſible cauſes has but little to do in forming the indications of cure; it may indeed be of uſe in ſhewing how to avoid or prevent a fever, but when we attempt to cure one we muſt always conſider the actual cauſes.

Hence it will appear, that as there can be no termination of the diſeaſe while the irritation in the vaſcular ſyſtem keeps up, nor while the ſpaſmodic conſtriction or obſtruction continues to block the extremities of the finer canals, the indications of cure muſt be directed to the correction or removal of whatever ſtimulates, the relaxation of conſtricted veſſels, and the attenuation of obſtructing particles; but the means for accompliſhing theſe ends will require to be varied, according to the particular ſpecies of the fever.

CHAP.

CHAP. V.

Diviſion of Fevers into Genera.

THOSE ſlight fevers which conſiſt of only one period, and terminate in a day or two, either from the ready aſſimilation of the irritating matters, or from the eaſy yielding of the obſtacles to free circulation, are termed Ephemeræ, as being ſuppoſed to run through their whole courſe in the ſpace of twenty-four hours; but when the morbific matter is of ſuch a nature, that it will neither aſſimilate with the fluids, nor ſeparate, and caſt off in this eaſy manner, then the febrile conflict will continue, and run on for various lengths of time, either till death enſues from a deſtruction of the natural craſis of the blood, and texture of the living ſolids, or until the obſtacles give way, and again allow the fluids to circulate with equability and freedom.

This fever, which thus runs on without intermiſſion, or even evident remiſſion, for a number of days or weeks, is diſtinguiſhed by the name of a continued, or continual fever, and conſtitutes the firſt genus.

Some of the ſyſtematic writers conſider the ephemera as a diſtinct genus, but improperly, it being only the ſlighteſt degree of continual fever.

Continued

Continued fevers are diſtinguiſhed into ſpecies, from the different ſtates of the fluids, and other attendant circumſtances, which will be particularly pointed out when we come to the practical part.

But there are fevers wherein the obſtacles to free circulation evidently give way in a few hours, and ſeem to allow the morbific matter, which in ſuch caſes muſt be capable of eaſy ſeparation, to paſs off by different outlets, and yet the noxious particles do not appear to be totally expelled, but leave a certain fomes behind, which lurks for different lengths of time, till being again rendered capable of affecting the nervous ſyſtem, it brings on a new attack of the fever, beginning as before, with exceſſive cold, ſhivering, ſickneſs, and oppreſſion, and ſucceeded by exceſſive heat, thirſt, pain, and reſtleſſneſs, which terminate by a relaxation of the conſtricted pores and veſſels, giving paſſage to a plentiful ſweat, and diſcharge of loaded urine. This genus is termed Intermittent, and is diſtinguiſhed into different ſpecies, according to the returns of the paroxyſm, and lengths of the interval between the ſeveral periods of the fever.

But there is another, and a third genus, wherein the morbific matter is found to be ſeparable, but not ſo as to leave the body perfectly free, as the intermittents do from the febrile ſymptoms; for here the ſeparation appears to be but partial, as the diſtreſſing ſymptoms only remit or abate of their violence; for the fever does not intirely ceaſe as in the intermittent, and therefore this genus

genus is termed the Remittent, and is diſtinguiſhable into ſpecies, according to different ſymptoms and circumſtances, which give them a diſtinct character.

The fourth genus of fever, which is termed the Eruptive, has ſomewhat in common with the remittent; for, whatever it be that raiſes the febrile ſymptoms, as ſoon as it is forced out, either through the pores in the ſides of the arteries, or through their open extremities, and is lodged among the inert ſolids in the cellular part of the ſkin, the irritation and ſpaſmodic conſtriction ceaſe or abate; of courſe likewiſe all the diſtreſſing ſymptoms depending thereon; and this ceſſation or abatement will be in proportion to the ſeparation and expulſion of the noxious particles.

Eruptive fevers are diſtinguiſhable into ſpecies, from the different appearance and progreſs of the eruption, which denominates them, ſmall-pox, meaſles, ſcarlet fever, miliary fever, &c.

The fifth and laſt genus of fever is the Hectic; in this the nervous ſyſtem appears to be much leſs affected than in any of the others, and the diſorder ſeems owing chiefly to the agitation of the blood, and irritation of the vaſcular ſyſtem, from acrid or ſtimulating matters, which are abſorbed from places where theſe are produced or accumulated, and being carried into the maſs of circulating fluids, raiſe tranſient fevers from time to time, that after a few hours either remit of their violence, or like the intermittents, leave the body perfectly free for a while. Hence it happens that

theſe fevers are not ſo ſuddenly deſtructive of life as thoſe of the other genera, wherein the nervous ſyſtem is always ſo much more diſordered; but, then, unleſs the ſources which ſupply fuel, as we may term it, for kindling up the fever, can be effectually cut off or removed, the hectic conſtantly, in the end, proves mortal.

Hectic fevers, like the other five genera, are diſtinguiſhable into different ſpecies, which will be deſcribed in the proper place.

CHAP. VI.

Of the Criſis in Fevers, and Doctrine of critical Days.

THOUGH poetry has the pleaſing privilege of uſing the proſopopoeia on every fit occaſion,

> " And, as imagination bodies forth
> " The forms of things unknown, the poet's pen
> " Turns them to ſhape, and gives to aiery nothing
> " A local habitation and a name ; *

Yet philoſophy ought never to indulge herſelf in ſuch liberties: it appears, however, that phyſicians have ſometimes aſſumed a licence of this ſort, and the introduction of the word Criſis into the medical language ſeems to have been owing to the notion, that diſeaſes are certain injurious agents, which take poſſeſſion of the human body

* Shakeſpeare.

body with a view to torment or deſtroy it; but that Nature, ever ſtudious for the body's preſervation, uſes every effort to ſubdue or expel the enemy; hence neceſſarily ariſes a conflict between Nature and the diſeaſe, which, like every other conteſt, muſt at length come to a period, and be determined or adjudged in favour of one of the contending parties: thus the word Criſis was brought in, and uſed by the Greek writers to ſignify this ſuppoſed deciſion or judgment, and is ſtill continued to expreſs the turn of the fever; when after, having arrived at its higheſt pitch, if death does not take place, the ſymptoms firſt abate of their violence, then altogether ſubſide, and health gradually returns.

As the criſis approaches, there appears to be an unuſual ſtruggle; the morbific matter ſeeming to grow more abundant, and to be more generally diffuſed, when the fever has been of ſome days continuance, than it was at the beginning.

At the commencement of fevers, and for ſome days afterwards, the morbific matter was ſuppoſed, by the firſt improvers of phyſic, to be in a crude ſtate; but as the diſeaſe went on, they conceived the notion of this matter's being ripened or concocted, which was the term uſed; at length, when the time of the criſis arrived, the offenſive particles were rendered capable of ſeparation, and being diſcharged, (partly by the pores of the ſkin, partly by the urinary paſſages, and other outlets) left the body free from diſeaſe: hence they deemed that practice improper and hazardous which endeavoured to diſcharge or expel, while things were ſuppoſed to

be in a ſtate of crudity; but held it as a maxim, that the phyſician ſhould wait until the concoction was perfect, and the morbific matter rendered moveable, and ready to be thrown off.

This idea of crudity and concoction, with regard to morbific matter, was carried too far when they extended it to every ſpecies of fever, becauſe there are many which may be prevented from getting to any dangerous height, and may be cut ſhort by proper treatment; while others, that are allowed to run out their whole courſe, are found to ſubſide without any evident critical diſcharge.

With reſpect indeed to eruptive fevers, and ſeveral of the continued, intermittent, and remittent kind, the doctrine appears to hold good, though ſome phyſicians of very great note have inclined to baniſh the notions of crudity, concoction, and morbific matter altogether, looking on fevers as mere affections of the nervous ſyſtem, independent of any thing morbific in the common maſs of groſs fluids.

The ancient Greek phyſicians, full of the ideas that have been already mentioned concerning the impropriety and danger of attempting to rid the body of morbific matter while in a crude ſtate, appear to have interfered but little in caſes of fever, truſting the concoction almoſt entirely to Nature; hence they had more time and better opportunities for obſerving the progreſs of the diſeaſe than moſt part of modern practitioners, who are almoſt perpetually either doing or giving ſomething to the patient.

Theſe

Theſe ancients, who thus gave themſelves little other employment than obſerving the genuine efforts of Nature, in firſt preparing, then ſeparating, and, laſtly, diſcharging the morbific matter, either found out, or at leaſt thought they diſcovered, that the criſis in continued fevers happened on certain days, reckoning from the firſt ſeizure.

Theſe days were ſaid to be the 3d, 5th, 7th, 9th, 11th, 14th, 17th, and 21ſt, if the fever did not run beyond three weeks; but if it exceeded that period, then four and three days were to be reckoned alternately on to the 42d day, or to the end of ſix weeks.

Of theſe there were ſome days held to be more eminently critical than others, particularly the 14th, and next to that the 7th.

Beſide the days on which beneficial changes were expected to happen, there are others which were reckoned indicatory of what was to fall out in the ſucceeding critical day: thus, the fourth is an index to the ſeventh, and the eleventh to the fourteenth.

At firſt ſight there appears to be a good deal of ſuperſtitious regard to certain numbers in this matter, and ſo it was judged by ſome of the ancients, as may be ſeen by looking into Celſus, where he criticiſes on this doctrine, and its founder, Hippocrates.

The writings which paſs under the name of this father of phyſic are evidently the work of different hands, and have different degrees of merit; and,

with

with reſpect to the doctrine of critical days, it muſt be confeſſed that they do not lay down ſuch a poſitive ſcheme as one could wiſh: and this the reader may be ſatisfied of, by comparing the ſeveral paſſages where the critical days are mentioned; indeed the celebrated Vienna profeſſor, De Haen, charges theſe diſagreements to the tranſcribers of the manuſcript copies, who were apt to miſtake the Greek letters which were uſed as numerals, and thus have confuſed the doctrine; for notwithſtanding this want of preciſion, he, and many other eminent and experienced phyſicians, have declared themſelves in favour of the critical days, and allege that it is very neceſſary to watch the appearances particularly on them, and to be cautious of bleeding, purging, or giving any thing that may tend to diſturb the criſis, by bringing on other diſcharges than thoſe which Nature ſeems to promote.

In the ſouthern parts of Europe, and in Aſia Minor, where the firſt improvers of phyſic practiſed, there is a degree of regularity with reſpect to the progreſs of fevers, which we do not meet with in theſe countries; ſo that their obſervations may have been juſt, though we do not always find them correſpond with thoſe which are made by practitioners reſident in a colder and more variable climate.

CHAP.

CHAP. VII.

General Deſcription and Theory of Inflammations.

INFLAMMATIONS are ſo nearly allied to fevers, that they have often been included in the ſame order, but not with propriety, as there are certain circumſtances peculiar to an inflammation, which give it a diſtinct character different from a fever, and every other ſpecies of diſeaſe.

An inflammation is ſufficiently apparent, when the part which is the ſeat of it can be ſeen; but when fixed internally, and it ſeizes on any of the contents of the three larger cavities, the ſigns are often equivocal.

The theories of inflammation, which of late have been generally taught, are thoſe of Boerhaave and Hoffman.

According to Boerhaave, the diſeaſe has its ſeat in the extremities of the finer arteries, and ariſes from an obſtruction, either when the diameter of the veſſels is leſſened, or when the particles of the circulating fluid become too large for the canals, through which they ought to paſs freely.

In his Aphoriſms (at Sect. 375, 6, and 7) all the different cauſes of this obſtruction are enumerated, either when ſuppoſed to depend on the leſſening of the arterial diameter, or upon increaſing the ſize of the globules: but beſide theſe cauſes, Boerhaave taught that the obſtruction may

may happen "ab errore loci," from globules getting, as it were, by miſtake into veſſels having diameters ſufficient to tranſmit them.

When an obſtruction was once formed, whether from error of place, or any other cauſe, it was believed that the ſucceeding fluid would urge on with additional force, in order to free the paſſage; in conſequence of which, the blood would accumulate, the minute arteries would be diſtended, their fibres would be diſtracted, and their cavities filled with larger globules than in the natural ſtate; while at the ſame time theſe globules would be violently agitated, and rubbed againſt each other, and againſt the ſides of the veſſels: hence all the diſtinguiſhing ſymptoms and marks of inflammation; namely, ſwelling, pain, redneſs, and heat.

The theory which is laid down by Hoffman does not differ in the main from that of his illuſtrious rival; for he alſo ſuppoſes, that there is a ſtaſis or ſtagnation of blood in the finer arteries, ariſing from a ſpaſmodic conſtriction of the veſſels, independent of any alteration with reſpect to the conſiſtence of the fluids.

But with all due deference to thoſe very reſpectable names, may it not be allowed to inquire, whether the actual or immediate cauſes of inflammation be not diametrically oppoſite to what they have laid down, and whether the blood, ſo far from being ſtopped or obſtructed in its paſſage through the arteries of an inflamed part, does not, on the contrary, meet with leſs reſiſtance from the ſides of the

the veſſels than it ought to meet with, and flow through both arteries and veins with an increaſe of force and velocity.

Experiments which have been made repeatedly on living animals ſhew, that even though groſs globules ſhould ſtop the paſſage through the extremities of the arteries, yet the ſucceeding blood, ſo far from being urged on with unuſual force to remove the obſtacle, would totally deſert theſe obſtructed veſſels, and flow into ſuch as are free; for, when a ligature is made on any particular branch of an artery, the blood is obſerved to forſake that branch, and flow into the adjoining ones which remain open, without creating any permanent ſwelling, or enlargement of the veſſel between the ligature and the heart.

The ſame conſequences follow in the human body, in all caſes where the paſſage is totally ſhut up, as it is in the umbilical arteries after a child is born, and in arteries which are cloſed up by ligature in the operation for an aneuriſm.

Since it is proved then, that neither the form of the veſſels, which cannot be conſidered as conical tubes, nor the compoſition of the blood, whoſe redneſs does not depend on the union of ſix ſerous globules, are favourable to the notion of obſtruction; and that neither obſtruction nor ſtaſis, even allowing them to take place, would be followed by thoſe effects and appearances which particularly diſtinguiſh an inflammation, it remains to be ſhewn what the changes are which give riſe to this very frequent diſeaſe.

The

The late Dr. Whytt was among the firſt who had courage to call in queſtion the theory of Boerhaave, and furniſhed arguments for deſtroying the notion that inflammations take their riſe from ſtaſis or obſtruction: he has demonſtrated in the moſt ſatisfactory manner, that the force of the heart and larger arteries is not ſufficient to carry on the circulation throughout the circumference of the vaſcular ſyſtem; and that unleſs there were an additional force, diſtinguiſhed by the name of oſcillatory motion, to puſh on the fluids in the ſmalleſt veſſels, the progreſſive motion of the general maſs would ſoon come to a period.

All thoſe different things which are comprehended under the general name of ſtimuli, have the power, when applied, of increaſing this oſcillatory motion; in conſequence of which, the flow of blood, or of ſecreted humour, through the particular parts of the ſyſtem ſo affected, comes to be proportionally increaſed, according to the degree of irritation.

There cannot be a more evident or familiar proof of this power than what is obſerved to happen when a mote gets into the eye, and irritates the veſſels of this very delicate organ: here we obſerve in a few minutes that the eye inflames; that is to ſay, it grows hot and painful, the veſſels become turgid with blood, and there is an evident flow of humours to the part affected.

The wounding of any ſenſible part, whether it be by puncture, inciſion, or laceration, the applying

plying of cauſtics or acrid ſtimulants, as well as of fire, or things heated beyond certain degrees; all theſe conſtantly increaſe the oſcillatory motion, and infallibly produce different degrees of inflammation.

But there is another circumſtance which muſt be taken into the account, and that is, the reſiſtance made by the veſſels at the circumference, and throughout the whole vaſcular ſyſtem, to the power of the heart, which is exerted from the center; for if this reſiſtance be leſſened or taken away by ſoftening, relaxing, rupturing, or dividing the coats of the veſſels, the blood is always found to make a puſh towards the weakened part.

Here then we have a ſecond ſource of inflammation, which may be proved by obſerving the effects of cupping-glaſſes. When a cupping-glaſs is applied to the ſurface of the body, and the air either exhauſted or rarefied, then ſo much of the power of reſiſtance as depended on the preſſure of the atmoſphere is taken away from the ſubcutaneous veſſels; immediately the blood ruſhes into theſe weak veſſels, diſtends them, and produces an evident degree of heat, with pain, ſwelling, and redneſs; all which, however, will ſubſide and diſappear in a ſhort time after the glaſs is removed, and the preſſure of the atmoſphere reſtored.

The ſame appearances always enſue, only more diffuſed, and in a leſs conſpicuous degree, when warm water or emollient poultices are applied to any particular part.

The

The concluſion to be now drawn is, that there are two immediate cauſes of inflammation; the one conſiſting in an increaſe or exceſs of oſcillatory motion, the other in a diminution of the reſiſting power in the coats of particular ſets of the ſmaller blood-veſſels.

A tranſient inflammation will ariſe from either of theſe cauſes; but if it be merely from the action of ſtimuli increaſing the oſcillatory motion, or merely from relaxation and want of due reſiſtance, the ſymptoms will be but ſlight, and there will be no ſettled inflammation, which only enſues in conſequence of the conjunct operation of both, when the reſiſting power of the veſſels is diminiſhed, and the oſcillatory motion at the ſame time increaſed.

When theſe two cauſes concur, the blood will ruſh into the affected veſſels, and be carried through them with unuſual degrees of force and rapidity; from whence are eaſily deduced all the eſſential ſigns and ſymptoms attending on inflammations.

In the firſt place, heat muſt be a neceſſary conſequence; for, let the original cauſe of animal heat be what it will, an increaſe of velocity with reſpect to the motion of the blood never fails to bring with it an increaſe of heat.

When the blood is heated beyond the natural degree, it proportionally expands and enlarges its volume; this expanſion diſtends the affected veſſels, and makes way for ſtill larger quantities of ſucceeding

ſucceeding blood, which will preſently be forced into the ſmalleſt canals, and many veſſels that in the natural and healthy ſtate appear to convey nothing but pellucid lymph, will now be ſurcharged with blood, whence in great meaſure proceeds the redneſs inſeparable from inflammations.

But it is not only the ſmalleſt arteries which are thus over-diſtended; for in caſes of inflammation, the incipient veins are alſo enlarged, as any one may be convinced of by obſerving an eye that is inflamed; where many, perhaps the greater part of the veſſels which appear ſo turgid, and obſcure the whiteneſs of the eye, are veins of the tunica conjunctiva.

Seeing then that both veins and arteries are thus overcharged, a ſwelling, tenſion, and hardneſs, muſt neceſſarily take place; for the arteries cannot be over-diſtended without a proportional enlargement of the pores in their coats, which in the natural ſtate allow only oily and lymphatic fluids to paſs; and theſe pores, when ſo enlarged, will not only permit the thinner fluids juſt now mentioned to tranſude in much larger quantities than they ought to do, but will alſo ſuffer ſome ſhare of the more groſs and red part of the blood to eſcape through theſe ways, whence an increaſe of redneſs and ſwelling. This accumulation in the cellular ſpaces cannot fail to preſs on the adjoining lymphatic veins, and thereby hinder the return of the lymph, whence a ſudden and monſtrous increaſe of the tumour, if the texture of the

the part which happens to be inflamed ſhould be looſe, and yielding. *

Pain muſt alſo be a neceſſary ſymptom in all caſes of inflammation, on account of the diſtraction and tenſion of the living ſolids; and if the veſſels which happen to be the ſeat of the diſeaſe are attached firmly to ſolid parts, or run much in ſtraight directions, higher degrees of tenſion will take place; and the higher the degrees of tenſion the more ſevere the degrees of pain; and hence it is, that when inflammations ſeize the finer membranes, or attack the bones, tendons, ligaments or cartilages, they are always accompanied with very acute pain, while thoſe which affect the ſofter viſcera and glandular parts are attended with inferior degrees, and ſometimes with very little pain.

Some of thoſe ſymptoms which are eſſential to a fever are likewiſe attendant on all caſes of conſiderable inflammation; and this hath made many of the medical writers confound the two diſeaſes; but in the moſt ſimple ſpecies of fever there is a combination of at leaſt four, if not five, of the general ſymptoms, namely, exceſſive heat, thirſt, loſs of appetite, weakneſs, and inability to ſleep; whereas, except in the more complex ſpecies of inflammation, we meet with only three of theſe five,

* In the practical part it will be ſhewn, that the lymphatics, which have hitherto been entirely overlooked, are very much affected in moſt inflammatory caſes; and in many inſtances, it will be found, that the whole of the diſeaſe, originally depends on diſorders either of the lymphatic veins themſelves, or glands intimately connected with them.

ſive, namely, exceſſive heat, thirſt, and inability to ſleep; ſo that the two other ſymptoms, weakneſs and loſs of appetite, which are chiefly affections of the nervous ſyſtem, and without which there can be no laſting fever, are not to be held as eſſential ſymptoms of an inflammation.

In caſes where an inflammation ariſes in conſequence of external injuries, ſuch as wounds, burns, contuſions, fractures, or luxations, which act in a double capacity, as not only creating an intenſeneſs of motion from irritation, but as alſo deſtroying the texture or weakening the ſides of the veſſels; here the local heat, pain, redneſs, and ſwelling, are evident, before we can perceive from the pulſe that there is any increaſe with reſpect to the general force and velocity of the whole maſs, or that the febrile ſymptoms of general heat, thirſt, and reſtleſſneſs give any diſtreſs, ſo that the fever here does not come on till after the inflammation has actually taken place.

But it frequently happens, that inflammations come on in conſequence of a fever; for when a fever is once raiſed, if there happens to be any particular organ, or part of the body, where the veſſels have ſuffered a diminution with reſpect to their power of reſiſtance, or if there be any thing acrid or ſtimulating mixed with the blood, which happens to ſettle in any particular place, theſe weakened or irritated veſſels will ſoon become the ſeat of an inflammation; becauſe, when the general maſs of fluids is beforehand put into violent motion, they will immediately ruſh into thoſe veſſels

veſſels where irritation and want of reſiſtance invite them.

It is ſufficiently obvious how alarming and dangerous theſe inflammations muſt be, that thus ſucceed the attack of a fever; in fact they are the immediate cauſes of death in many fevers, and it is with the view of preventing theſe ſupervening inflammations that, in the commencement of fevers, (at leaſt all ſuch as ſet out with a ſtrong, full, and rapid pulſe, and betray ſigns of great intenſeneſs with reſpect to the motions of the vaſcular ſyſtem) phyſicians endeavour, by timely and proper evacuations, ſo to moderate the force of the ſymptoms, that the nobler parts may be freed from the danger of having a load of blood thrown into their veſſels during the courſe of the fever.

CHAP. VIII.

Of the different Ways in which an Inflammation may terminate: Reſolution, Exudation, Suppuration, Gangrene, Scirrhus.

WHEN an inflammation is once formed, there are five ways in which it may terminate.

The firſt and moſt deſirable is termed Reſolution or Diſcuſſion; the ſecond, Exudation; the third, Suppuration or Abſceſs; the fourth, Gangrene; and the fifth, Scirrhus, or indolent hardneſs and ſwelling.

RESO-

RESOLUTION.—If things can be ſo managed early in the diſeaſe, that the intenſeneſs of oſcillatory motion ſhall be brought down, and the veſſels recover their ſtrength, before that the fluids, which tranſude through the pores in the ſides of the arteries into the cellular interſtices, either accumulate to ſuch a degree, or become ſo groſs and viſcid, that they can neither be taken up by the abſorbents, nor be diſſipated through the pores of the ſkin; then the inflammation will terminate by a reſolution, which, when practicable, we are always to aim at, by diverting the flow of blood, allaying the intenſeneſs of motion, ſtrengthening and ſupporting the coats of the veſſels, and favouring the diſſipation of the accumulated fluids.

EXUDATION.—But if theſe ends cannot be accompliſhed within the proper time, and the blood continues to ruſh with unuſual force into the veſſels of the inflamed part, the arteries will then be diſtended, the pores will be enlarged more and more in conſequence of the augmented heat and expanſion of the fluids; and this extraordinary enlargement of the pores will give paſſage to a quantity of fluids, which will either be lodged in the cellular interſtices, or be thrown off by exudation from the ſurface of the inflamed part.

The fluid which is thrown off by exudation differs conſiderably in colour, ſmell, and conſiſtence, from blood, lymph, mucus, and every other fluid exiſting previous to inflammation;

and theſe differences ſeem partly to ariſe from the enlarged dimenſions of the arterial pores, and partly from the changes which the inflamed blood undergoes with reſpect to the combination of its inſenſible particles: in particular, the coagulable lymph, in ſubjects labouring under inflammatory diſeaſes, is found to be in a more diſſolved ſtate, and leſs diſpoſed to coagulate, than it is in the blood of perſons free from inflammation. But this circumſtance will be more fully explained on a future occaſion, when we come to treat of the inferences that are to be drawn from the different appearances of the blood.

The veſſels being thus unloaded, and relieved from the great diſtraction and tenſion of their fibres, the heat will abate, the pain wear off, and the ſwelling ſubſide.

When an inflammation is ſeated in the veſſels interwoven with the ſkin, or with any of the membranes lining the internal cavities and paſſages, or covering the different viſcera, this diſcharge by exudation terminates the diſeaſe; and it is in this way that the inflammation which enſues in conſequence of burns or wounds always finiſhes its courſe; the pain, heat, ſwelling and redneſs ſubſiding, and going off gradually, as the digeſtion comes on, and the purulent diſcharge increaſes: in the ſame manner that ſpecies of inflammation termed Eryſipelas, which has its ſeat in the veſſels of the ſkin, frequently terminates; numerous little puſtules or veſicles being raiſed, diſcharge themſelves plentifully, and unload the inflamed

inflamed veſſels. In like manner, when the membranes which line the noſe, fauces, aſpera arteria, or pulmonary veſicles, are but ſlightly inflamed, the diſeaſe frequently goes off by this way of exudation; as it does alſo in that very common diſeaſe the gonorrhœa virulenta, where the veſſels of the urethra are the ſeat of the inflammation.

When the matter which thus exudes and terminates the inflammation meets with a free and ready outlet, every thing does well, and health is very ſoon reſtored; but the affair will not end ſo happily if the purulent matter which ouzes from the membranes that line the thorax and abdomen, or which cover the different viſcera contained in either cavity, is detained there; for in ſuch caſes, though the pain ceaſes, yet a new train of ſymptoms will ſucceed, and produce a hectic fever.

SUPPURATION or ABSCESS.—It is plain that the ſecond way in which an inflammation may terminate, can only take place when the diſeaſe chances to be ſeated in veſſels that run near the ſurface; for, when it is more deeply fixed in the ſubſtance of any bowel, or in ſome fleſhy or glandular part, and cannot be reſolved or diſcuſſed, the quantity of fluids which tranſude from the pores in the arteries ſoon comes to be more than the abſorbents can take up and carry off; in conſequence of which, there is an accumulation of theſe tranſuded humours, which quickly begin to ferment, and in time acquire the power of diſſolving and melting down the lamellæ, which connect the veſſels and muſcular

fibres, as well as the adipoſe cells or veſicles, particularly deſtined for containing the fat.

In this manner is formed what the ſurgeons term Pus, or the matter of an abſceſs; the third way in which an inflammation is obſerved to terminate.

While an abſceſs is forming, and the matter collecting, ſome of the purulent particles will, from time to time, be abſorbed; and, being carried back into the circulation, will occaſion irregular ſhiverings, ſucceeded by tranſient feveriſh fits, unleſs it ſhould ſo happen, that as the collection of matter increaſes, a compact kind of cyſt or bag ſhould be formed for it, by the compreſſion and hardening of the ſurrounding lamellæ of the tela celluloſa, which ſometimes becomes ſo firm as to confine the pus, and allow of little or no abſorption; in which caſe, neither ſhiverings nor ſucceſſive hot fits will be perceivable, but every thing will remain quiet until the abſceſs either burſts, or by its enlargement comes to preſs upon ſome organ of importance.

Next to reſolution or diſcuſſion, exudation is the moſt deſirable way in which an inflammation can terminate, provided the purulent matter finds a ready outlet; but where exudation does not happen, then abſceſs is what we are to wiſh for, becauſe the ſolids which are deſtroyed by ſuppuration are not what we underſtand by the name of living ſolids; for in caſes of abſceſs (even thoſe of large ſize, which occupy ſuch parts as allow a ſpeedy opening, and thorough diſcharge of the contained

contained matter) it is obſervable, that after they heal up, there are ſeldom any permanent defects with regard to the motion, ſtrength, or ſenſibility of the part which was affected, which plainly proves that there is little or no deſtruction of nerves or blood-veſſels; for theſe laſt, notwithſtanding their ſuffering ſo much from over-diſtenſion, and the enlargement of their pores in conſequence of that diſtenſion, yet, as their fibres are not entirely ruptured, they ſoon recover themſelves by their own natural elaſticity; and as for the inert ſolids that are melted down into pus, they are very ſoon reſtored after the matter is evacuated, and the abſceſs healed up, by the acceſſion of nutritious particles poured into the cellular interſtices.

GANGRENE.—But when the motion of the circulating fluids through the veſſels of the inflamed part is ſo extremely violent, or when the coats of the arteries are ſo unuſually weak that they give way, and burſt aſunder, inſtead of only enlarging their pores to let the fluids eſcape into the cellular interſtices, then their texture is deſtroyed; from the rupturing of living fibres, the pain ceaſes, and from the extravaſation of blood, the part that before was red and ſhining becomes ſhrivelled, and dark coloured or livid; the cells, which in caſes of ſuppuration are filled chiefly with lymphatic and oily fluids, being now loaded with blood, this blood ſoon begins to corrupt, loſes its bright redneſs, and the ſerum, parting from the craſſamentum, is forced out toward the ſurface, raiſing up the cuticle into bliſters.

In

In this manner comes on what is termed a Gangrene, and by conſidering the progreſs, it is eaſy to comprehend, that where the blood is in an acrid ſtate, or where the coats of the veſſels have been injured by ſevere bruiſes, or gradually weakened by ſome preceding diſtemper, there muſt be much more danger of an inflammation's ending in a gangrene, than in ſubjects and conſtitutions where there is no ſuch injury, weakneſs, or acrimony.

Gangrenes indeed ſeldom take place except in conſtitutions ſuch as thoſe above deſcribed; and hence it is, that in old people, and in ſcorbutic or dropſical habits, where the juices in general are in an acrid ſtate, and the ſolids weak or fragile, many inflammations which ariſe from trifling accidents, and appear but little alarming in the beginning, ſo often terminate in gangrenes and death.

SCIRRHUS.—There is ſtill one way of termination left unexplained, which is always mentioned by the ſyſtematic writers, and this is what they term Scirrhus. This takes place when an inflammation will neither diſperſe in the beginning, ſpend itſelf by exudation, run on to a ſuppuration, and form an abſceſs, nor degenerate into a gangrene; but the pain and heat ceaſing to be felt, nothing remains ſave the ſwelling and an inferior degree of redneſs or diſcoloration.

It is chiefly in the parenchymatous viſcera and glandular parts that theſe indolent ſwellings are found to remain after an inflammation; for in thoſe

thoſe places the circulation is naturally languid, and there is frequently not a degree of heat ſufficient to bring about that fermentatory proceſs, which produces a true ſuppuration, nor force enough to rupture the veſſels and bring on a gangrene, which ſeldom takes place in the glandular parts, except in caſes where there is an acrimonious humour, of the ſharpeſt nature, depoſited immediately on the veſſels of ſome particular gland.

It is to be obſerved, however, that by far the greater number of hard indolent ſwellings, which are met with in practice under the name of Scirrhi, are not the conſequences of inflammation, but take their riſe from ſlow and imperceptible beginnings, are originally owing to ſome inexplicable fault in the fluids, and very often end in cancers.

As every part of the body has blood-veſſels interwoven with its texture, if we except ſome of the very thinneſt membranes, the cuticle, the nails, and the hairs, ſo, every part, excepting theſe, is liable to become the ſeat of an inflammation; but thoſe parts which are moſt full of blood-veſſels, expoſed to external injuries, or to the action of irritating matters floating in the atmoſphere, are the moſt ſubject to this diſeaſe, which muſt neceſſarily produce different kinds and degrees of diſtreſs and danger, according to the nature, uſe, and importance of the part which happens to be the ſeat of inflammation.

As to the diviſion of this order of diſeaſes, there is no neceſſity for making more than two genera;

genera: External inflammations, when the part affected being within reach, we can avail ourſelves of topical applications; and Internal, where the chief dependance muſt be on general evacuations and internal remedies.

Of each of theſe there are ſeveral ſpecies, and of theſe ſpecies many varieties, as will be ſhewn in the proper place.

CHAP. IX.

Theory of Fluxes, and Diviſion into different Genera.

HAVING been ſo full on the theory of fevers and inflammations, we ſhall not be under the neceſſity of enlarging upon that which regards fluxes.

The blood and various ſecreted humours will eſcape from the veſſels or different canals and cyſts, appropriated for containing them, whenever the weight of the fluid, or the force wherewith it is urged on, ſhall come to be ſo far increaſed as to break through the coats of the cyſt or veſſel, or overcome the native power of the ſphincters which conſtringe the orifices of the excretory ducts and natural paſſages; and they will likewiſe eſcape whenever the ſolid texture of theſe coats is ſo far impaired, or the conſtrictive power of theſe ſphincters ſo far weakened, that there is not ſufficient firmneſs and ſtrength to reſiſt the natural weight and impulſe of the fluids.

Thus

Thus it appears, that there are two ſources from whence preternatural and morbid diſcharges may take their riſe: the one, from exceſſes reſpecting the parts contained; the other, from defects with regard to the parts containing.

All fluxes that are laſting, and riſe to ſuch a height as to be reckoned morbid, are derived from both ſources; that is, the momentum of the fluids is increaſed, while the ſtrength of the ſolids is diminiſhed; ſo that here, as was explained with reſpect to inflammations, the diſeaſe is to be conſidered as depending on the conjunct operation of two cauſes.

But ſometimes the more predominant of the two cauſes ſhall be increaſe of momentum, and at other times diminution of firmneſs in the ſolid texture of the coats of the veſſels, or want of conſtrictive power in the ſphincters.

Such fluxes as are moſt owing to an increaſe of momentum in the circulating fluids are termed Active, while thoſe that more evidently proceed from weakneſs of the ſphincter, or from ſolution of continuity in the ſolid ſubſtance, are called Paſſive fluxes.

Very often the intenſeneſs of motion does not extend to the circulation in general, but is reſtricted to particular ſets of blood-veſſels, or particular excretory ducts; and then it is to be conſidered as depending merely on the increaſe of oſcillatory motion in theſe diſtinct places: when this is the caſe, the diſcharge, whether it be of blood or of any ſecreted

creted humour, will be moderate, and not productive of great diſtreſs or immediate danger.

But when the circulating force with reſpect to the whole ſyſtem is increaſed, then the diſeaſe becomes proportionally hazardous and alarming.

All fluxes that are accompanied or produced by a general increaſe of the circulating force, begin, like fevers, with ſpaſmodic conſtriction, or ſtagnation in the extremities of the vaſcular ſyſtem; whence ariſe the ſymptoms of exceſſive cold, ſickneſs and oppreſſion, ſoon after ſucceeded by exceſſive heat, with thirſt, reſtleſſneſs, and very often pain.

If the diſcharge which enſues be ſufficient to carry off the whole of the offending matter that firſt occaſioned the ſtoppage at the circumference, the diſtreſſing ſymptoms will ſubſide in a ſhort time, and health be again reſtored; ſo that fluxes of this kind, as we may often obſerve in practice, have a ſalutary effect.

But if the morbific matter be not ſo diſcharged, and a quantity of it remains ſufficient to keep up the irritation, not only in the vaſcular ſyſtem at large, but likewiſe in the particular ſets of veſſels or excretory ducts, from whence the flow of blood or humours proceeds, then the diſeaſe will continue, and acceſſory ſymptoms come on, until at length the animal ſtrength being totally exhauſted, life muſt neceſſarily ſink under the diſcharge.

Thoſe diſcharges which are not accompanied with general intenſeneſs of motion, (which we can

can always tell from the quiet pulſe and abſence of the diſtinguiſhing febrile ſymptoms) and which proceed from an increaſe of oſcillatory motion in particular ſets of veſſels only, are always brought on from ſome ſtimulant or corroſive matter immediately applied, which either irritates or erodes the ſolid texture.

From comparing the immediate cauſes of fluxes with thoſe which produce inflammations, we immediately ſee whence it ariſes, that all thoſe which are termed Active ſhould be preceded or accompanied by certain degrees of inflammation; and we may alſo underſtand how diſcharges, which at firſt are purely ſanguineous or lymphatic, in a few days may become purulent.

The fluxes, which we conſider at preſent as conſtituting the third order of univerſal diſeaſes, are thoſe which have predominant degrees of weakneſs, ſickneſs, pain, or ſome other general ſymptom; for all others of a leſs alarming and leſs hazardous nature, wherein the diſcharge is the moſt conſpicuous part of the diſeaſe, are to be claſſed along with the partial and local diſeaſes, and will be included in the fourth order, which comprehends the diſeaſes of particular ſecretions and excretions.

The order of fluxes conſiſts of three genera; 1. Alvine-fluxes. 2. Hæmorrhages. And, 3. Humoral diſcharges.

To the genus of alvine-fluxes belong all thoſe preternatural and morbid diſcharges which come from the alimentary canal, and which are made up of feculent and excrementitious matters, blended with

with different kinds of humour, and ſometimes with blood.

To the genus of hæmorrhages belong all the different ſpecies of ſanguineous diſcharges which come from the natural paſſages, for it is not intended to include the bleeding from wounds.

The genus of humoral diſcharges includes the ſeveral diſeaſes wherein there is a preternatural flux of ſome of the ſecreted fluids; none of the ſpecies of which, however, excepting the ephidroſis or colliquative ſweating, and the diabetes or profuſe diſcharge of urine, can well be ranked with the univerſal diſeaſes, but muſt come into the ſecond claſs, under the fourth order.

CHAP. X.

General Theory of the painful and ſpaſmodic Diſeaſes, and Diviſion into Genera.

IN the three foregoing orders, diſturbance of the vaſcular ſyſtem apparently conſtitutes the principal part of the diſeaſe, and therefore we have been enabled, in ſome meaſure to explain their riſe and progreſs; but as to the enſuing three, we can promiſe the reader but little ſatisfaction, ſince the diſeaſes included therein, for the moſt part, conſiſt of ſymptoms that are purely nervous.

In theſe caſes of mere nervous diſturbance, as the complaints often proceed from ſympathy, it would be of great importance in forming the indications of

of cure, if we could diſtinguiſh when a diſeaſe is idiopathic, and when it is only ſympathetic; but unfortunately this is a matter which the phyſician is not always able to decide.

Hoffman and Whytt are the authors who appear to have obſerved the ſympathetic connections with the greateſt attention, and therefore are to be carefully ſtudied; the former in his "Medicina "Rationalis," (Cap. de conſenſu partium nervoſarum generatim, et ſigillatim cum ventriculo;) and the latter in the beginning of his "Treatiſe "on nervous Diſeaſes." The obſervations of both theſe writers will be found of conſiderable uſe in explaining the various appearances, and in pointing out the moſt rational ſchemes of relief in the different nervous diſeaſes, particularly the painful and the ſpaſmodic, which are the orders next to be conſidered.

PAINFUL DISEASES.—In the fourth order of univerſal diſeaſes, the predominant ſymptom is pain; but without any ſettled fever, remarkable diſcharge, evident ſpaſm, or true inflammation: if we did not make theſe reſerves, we ſhould confound many ſpecies of fever, the dyſentery, the tetanus, and inflammations in general, with the head-ach, colic, gout, and rheumatiſm, and thereby render the ſyſtematic ſcheme of arrangement of no practical uſe; for the principal thing to be aimed at, is to bring thoſe diſeaſes which require ſimilar methods of treatment as much as poſſible under one point of view.

The

The theory of the predominant ſymptom, as conſidered in the abſtract, having been already laid down, and its immediate cauſe explained, it only now remains to inquire into the remote cauſes of thoſe diſeaſes wherein pain forms the principal part of the diſtreſs.

Flatus and acrimony may be looked on as the chief ſources of the painful diſeaſes.

That elaſtic vapour or flatulent matter which is often obſervable in valetudinary people, ſeems to proceed originally from faults in the digeſtive proceſs; the aerial part of the ſubſtances on which we feed being extricated during their fermentation in the alimentary canal, and not being afterwards ſufficiently reduced to the ſtate of fixed air, is often an evident cauſe of diſtreſs while it remains in the ſtomach and inteſtines; but how it acts, after it paſſes the thoracic duct, and has mixed itſelf with the general maſs of fluids, is a point that as yet remains unexplained.

Flatus, while pent up in the alimentary canal, by over-diſtending the ſenſible fibres which are interwoven with the coats of the ſtomach and inteſtines, produces variety of pains, generally denominated Colic, and oftentimes ſpreads the diſorder by ſympathy to diſtant and ſeemingly unconnected organs. And, according to a vulgar notion, the aerial matter, when mixed with the fluids in circulation, proves the cauſe of pains, by diſtracting the ſenſible fibres in various places where it is ſuppoſed to expand itſelf; whence ſtitches, as they are uſually called, and cramps.

It

It was formerly obſerved, that we muſt be contented to remain in ignorance as to the intimate nature of the different ſpecies of acrimony or morbific matter, which give riſe to various diſeaſes: it is in vain to pretend to deſcribe their qualities, or to define them in any other way than according to the diſeaſe which they are ſeverally preſumed to produce. Thus we ſay, that there are ſuch ſubtile matters as an arthritic acrimony, a rheumatic, a ſcorbutic, a cancerous, and a ſyphilitic, which are to be conſidered as the remote or poſſible cauſes of pain in different ſubjects.

That ſome of theſe kinds of morbific matter exiſt in the groſs fluids, may be inferred from their being capable of correction and extinction by the virtues of appropriate alterative medicines; others again are thought to be ſo far blended with the ſubtile fluid of the nerves, that they are beyond the reach of any remedy that as yet is in the poſſeſſion of phyſicians.

Beſide flatus and acrimony, there is another occaſional cauſe of the painful diſeaſes, namely, calculous concretions, which are formed in different parts of the body, particularly the paſſages for bile and urine, where they often irritate, over-diſtend, or lacerate the ſenſible fibres, and thus create pain, not only in the places where theſe offenſive ſubſtances are immediately applied, but alſo in places at ſome diſtance.

The retention of excrementitious humours, or of feculent matters, is alſo a frequent cauſe of different

ferent ſpecies of theſe diſeaſes which are diſtinguiſhed by ſevere pain.

The order of painful diſeaſes may be diſtinguiſhed into the following genera:

I. Gout.—A frequent diſeaſe, remarkable for the ſharp pain which fixes on the articulations, eſpecially of the feet and hands. It is a periodical diſeaſe, but the paroxyſms generally return at uncertain periods; the fit is generally preceded by complaints of weight and ſickneſs in the ſtomach; and when at the height, the pain is accompanied with redneſs and ſwelling of the affected part, a quick pulſe, and feveriſh heat.

II. Rheumatism.—Alſo a common diſeaſe, but not periodical; it is uſually the conſequence of obſtructed perſpiration, and is diſtinguiſhable from the gout by the ſeat of the pains, which ſpread from the joints along the courſe of the muſcles, and ſeem fixed in the fleſhy ſubſtance; the knees, hips, loins, and ſhoulders, are the places where rheumatic pains are moſt ſeverely felt; they are not followed by ſuch an evident ſwelling and redneſs as arthritic pains, neither are they preceded by the complaints of the ſtomach, though for the moſt part with higher degrees of fever.

III. Ostocopus. — A diſeaſe not often met with, but diſtinguiſhed by pains deeply ſeated, as if in the middle of different bones.

IV. Head-ach.—Of which the cephalalgia, cephalæa, and hemicrania, may be conſidered as ſpecies.

V. Odon-

ODONTALGIA; Tooth-ach.—Proceeding from different cauſes, which produce different ſpecies. As in like manner, the

VI. OTALGIA; Ear-ach.

VII. PROSOPALGIA; Face-ach.—A diſeaſe firſt deſcribed by Dr. Fothergill, may be ſo termed. It is a moſt excruciating pain of the face, returning at uncertain periods, which generally ſeizes women rather paſt the prime of life, but not attended with inflammation or dependent on diſorders of the teeth.

VIII. PLEURODYNE, Pain of the cheſt.—Diſtinguiſhed by a ſharp pain in different places of the thorax, without the ſymptoms peculiar to inflammations.

IX. PAIN of the STOMACH.—Of which cardialgia, gaſtrodynia, and pyroſis, are different ſpecies.

X. COLIC.—Diſtinguiſhed by ſevere pain, fixed in different places of the abdomen, accompanied with coſtiveneſs: of this there are ſeveral ſpecies.

XI. NEPHRALGIA, Pain of the kidneys; and

XII. CYSTALGIA, Pain of the bladder;—when not immediately depending on inflammation, the terms then being Nephritis, and Cyſtitis. Both theſe, in common language, are called indifferently Stone or Gravel, though they may, and often do proceed from other cauſes: the appearances in the urine, with the ſeat of the pain,

and other concomitant circumſtances, ſerve to diſtinguiſh theſe diſeaſes.

XIII. Ischuria.—Or ſtoppage of urine, accompanied at firſt with ſevere pain, nauſea, and frequently vomiting: of this there are three ſpecies, and many varieties, diſtinguiſhed according to the different cauſes of the ſtoppage, and circumſtances attending.

XIV. Proctalgia.—Diſtinguiſhed by a fixed pain in the anus, or lower part of the rectum, which, as it may proceed from different ſources, produces different ſpecies of the diſeaſe.

It may be obſerved of the painful diſeaſes in general, that ſo long as they conſiſt of little more than mere nervous affection, (ſuch as we preſume the ſymptom-pain to be) and are not accompanied with any conſiderable or permanent degree of diſturbance in the motions of the vaſcular ſyſtem, though the diſtreſs may be very great, yet they are not found to be immediately deſtructive; for it is not uncommon to ſee perſons ſeverely afflicted with different kinds of the diſeaſes above-mentioned, who ſhall ſurvive repeated paroxyſms, or even continued ſuffering, and notwithſtanding arrive at the period of old age.

SPASMODIC DISEASES.—If it be confeſſed that the theory of the painful diſeaſes is defective and obſcure, the ſame muſt be allowed with reſpect to thoſe of the ſucceeding order, wherein ſpaſm forms the diſtinguiſhing characteriſtic.

In

In general, theſe diſeaſes, like thoſe diſtinguiſhed by pain, are ſaid to be occaſioned either by flatus or different ſpecies of acrimony, affecting the motory nerves, whereas in painful diſeaſes the ſenſory alone are ſuppoſed to be diſturbed; by ſolid ſubſtances acting mechanically, ſuch as ſplinters of bone, ſtoney concretions, &c. by the retention of excrementitious humours, or of acrid and offenſive matters, eſpecially in the alimentary canal; or by the gnawing of worms in different places, which ſpread the diſturbance by ſympathy.

Excepting thoſe ſpaſmodic diſeaſes which ariſe from the irritation of ſuch things as are apt to lodge in the alimentary canal, very few ſpecies are found to be curable; but it is obſervable of them, as well as of the painful diſeaſes, that they may continue to afflict the patient for a length of time, without proving fatal, provided the diſorder continues to be purely nervous, and that the motions of the vaſcular ſyſtem are but little diſturbed.

The principal genera of the ſpaſmodic diſeaſes, which are to be ranked among thoſe of the firſt claſs, are,

I. Tetanus.—This is a frequent and fatal diſeaſe in the hot countries, and is known by the rigid contraction of the muſcles in general, accompanied with ſevere paroxyſms of pain, and difficulty of breathing.

II. Catochus.—Wherein the muſcles in general are rigid as in the tetanus, but not attended with pain.

III. Capistrum or Locked Jaw.—A diſeaſe which ſometimes invades without any evident cauſe, but much oftener comes on after wounds of the tendinous parts. Its name denotes the predominant ſymptom, which is a rigid contraction of the muſcles that raiſe the lower jaw.

IV. Angina Pectoris: Seems to be a ſpaſm of the Heart.—The name was given by Dr. Heberden, who firſt called up the attention of the faculty to this diſeaſe. Thoſe who are afflicted are ſeized as they are walking, or otherwiſe exerciſing, and more eſpecially if it be ſoon after eating, with a painful and moſt diſagreeable ſenſation in the breaſt, under the ſternum, and the pain ſtriking acroſs the cheſt, into the arms, near the elbows, ſeems as if it would take their life away, if it were to increaſe or continue; the moment they ceaſe from motion, the diſtreſs vaniſhes. In other reſpects, the patients, at the beginning of this diſorder, are perfectly well, and in particular have no ſhortneſs of breath. They, for the moſt part, die ſuddenly.

V. Hydrophobia.—This (though not with propriety) is ſometimes ranked with the mental diſeaſes, and conſidered as a ſpecies of madneſs; its diſtinguiſhing ſymptom, the total inability to ſwallow liquids, is evidently owing to ſpaſm, and though accompanied with an inſuperable dread and averſion even to the ſight of them, there are no other ſigns of delirium, until death is very near at hand.

VI. Convulsion.—This term, in common language, is uſed to expreſs all the different ſpecies

cies of diſeaſes wherein the muſcles are agitated by violent, irregular, and involuntary contractions and relaxations; but here, we intend by it ſuch only as differ in nothing from the epilepſy, except that the patients remain ſenſible.

VII. Epilepsy.—The patient falls down inſenſible, and the muſcles in general are violently agitated; the fits laſt from ten or fifteen minutes, to one or two hours; and return either at uncertain intervals, or at ſtated periods; and thus the diſeaſe runs on frequently for years.

VIII. Eclampsia.—When a convulſion is attended with loſs of ſenſe, like the epilepſy, but does not return periodically.

IX. Hieranosos.—Is the name for a diſeaſe which continues for years, and conſiſts in a perpetual agitation of the muſcles in general, without much pain or loſs of ſenſe. This caſe rarely occurs.

Such are the genera of ſpaſmodic diſeaſes, which are intitled to a place in the fifth order of the firſt claſs; as to thoſe that affect a particular ſet of muſcles, and impede only ſome particular action, they are to be claſſed with the local diſeaſes.

CHAP.

CHAP. XI.

Weakneſſes and Privations, their different Genera.

AS oppoſites to the painful and ſpaſmodic diſeaſes, we may conſider the ſixth order, wherein ſomnolency, relaxation of the muſcular fibres, and inſenſibility, are the diſtinguiſhing characteriſtics.

The genera comprehended in this order are,

I. COMA.—The diſeaſes wherein there is a preternatural and morbid degree of ſleepineſs, which predominates above the other ſymptoms, are termed in general Comata. They are diſtinguiſhable from faintings by the heat of the body, which does not remarkably diminiſh, and by the pulſe which continues full and ſtrong. The names of the different ſpecies will be explained, and the ſpecific differences pointed out, in the practical part.

The remote or contingent cauſes are uſually ſuppoſed to be collections of ſerous or ſanguineous fluids, pent up within the cranium, which preſs on the medullary part of the brain, the ſource from whence it is preſumed the nerves derive their animating fluid.

II. PALSY.—By this term are underſtood thoſe diſeaſes wherein the muſcular power fails, and where weakneſs is the predominant ſymptom, when

when unattended with fever. In palſies the loſs of ſtrength is uſually accompanied with loſs of feeling, owing, as it is preſumed, to the deficiency or inactivity of the nervous fluid. Palſies frequently ſucceed the different ſpecies of comata, as alſo ſome ſpecies of the painful or ſpaſmodic diſeaſes.

III. FAINTING.—Is diſtinguiſhable by the ſudden and total failure of ſtrength, accompanied with coldneſs, paleneſs, and a pulſe either much weakened or not to be felt at all. Profuſe diſcharges that carry off the animating fluids, or mephitic vapours, which in ſome inexplicable way deſtroy the healthy properties of the ſame, are the moſt common occaſional cauſes of fainting. Violent paſſions alſo are ſometimes followed by a ſuſpenſion of the vital motions. Hence different ſpecies and degrees of fainting, known by different appellations.

CHAP. XII.

Aſthmatic Diſeaſes, divided into Genera.

WE ſhould only repeat what was ſaid in the ſeventh Chapter of the ſecond Book, if we were to enter on a general theory of aſthmatic diſeaſes, as the nature, cauſes, and conſequences of the predominant ſymptom were there explained. When the particular ſpecies of this order come to be deſcribed, there will be a neceſſity then of adding ſomewhat in regard to each of them, but at preſent

ſent nothing more is requiſite than to diſtinguiſh the genera, which are as follow:

1. Hydrothorax, or dropſy of the cheſt, is known by continual difficulty of breathing, which becomes more diſtreſſing, and threatens ſuffocation when the patient lies horizontally; the face is pale and bloated; the hands and feet are puffed up with œdematous ſwellings; the ſleep is diſturbed with uneaſy ſtartings; the pulſe intermits; there is a palpitation of the heart, and the urine is deficient.

II. Empyema.—When ſymptoms nearly the ſame as thoſe which diſtinguiſh the hydrothorax ſucceed an inflammation of the lungs, and are attended with a hectic fever, they ſerve to ſhew that there is a collection of purulent matter in the cheſt, and conſtitute a diſeaſe which is known by the name of empyema.

III. Dyspnoea.—An habitual difficulty of breathing, but not accompanied with the ſigns which diſtinguiſh the hydrothorax and empyema.

IV. Orthopnoea.—An accidental and extreme difficulty of breathing, without the ſigns of inflammation in the lungs.

V. Asthma.—An extreme difficulty of breathing, returning at uncertain periods, in paroxyſms which continue for different lengths of time.

CHAP.

CHAP. XIII.

Mental Diſeaſes, their different Genera.

THOSE diſeaſes wherein delirium without fever predominates, and which for that reaſon have been termed Mental, come next under conſideration.

It was formerly obſerved, that ſo cloſe is the union between ſoul and body, that changes wrought in the one are neceſſarily transferred to the other; for inſtance, how ſoon may a perſon of the ſoundeſt underſtanding be deprived of the reaſoning power, by drinking fermented liquors? Theſe, without doubt, induce certain changes in the corporeal frame, which, in ſome myſterious way, alter the faculties of the mind; while, on the other hand, there are well-atteſted inſtances of people whoſe hair has changed colour (not to mention other viſible alterations in the exterior habit) in conſequence of violent paſſions or of deep meditation: ſuch power have affections of the ſoul in changing the ſtate of the ſolids and fluids. Hence two ſources of mental diſeaſes, the one depending on our material part, the other on that which is immaterial. But ſince even thoſe affections or changes of the corporeal frame, which may be deemed material cauſes, are far removed from the eye of the moſt inquiſitive anatomiſt, it is eaſy to ſee that the theory here muſt be totally obſcure.

Pathologiſts

Pathologiſts indeed may ſpeak in a vague and general way of irregularity in the motions of that part of the nervous ſyſtem which conſtitutes the organs of internal ſenſe, but this conveys no information, neither is it more ſatisfactory to trace what may be termed the remote cauſes with any other view than to prevent theſe diſeaſes: thus, when it is known that different ſpecies of madneſs have enſued after a ſalivation or after hard drinking, it may ſerve to put ſuch people on their guard as have any hereditary or conſtitutional diſpoſition to theſe diſeaſes, and teach them caution and moderation in the uſe of mercury and fermented liquors. But as to the appearances which have been obſerved on diſſecting the brain of different maniacal ſubjects, the knowledge ſerves for little more than to gratify curioſity, and has been of no ſervice in enabling phyſicians to eſtabliſh ſucceſsful methods of cure.

With the ſame view to prevention, it is of uſe that it ſhould be known, that when people yield themſelves up to love, avarice, or religious ſuperſtition, and ſuffer their minds to be wholly engroſſed by thoſe violent paſſions and deſires which are peculiar to each, they become liable to loſe the uſe of their reaſon: as alſo from exceſſive joy, and an unexpected flow of good fortune, as well as from extreme grief and anguiſh on account of ſevere loſſes and diſappointments.

Of the mental diſeaſes, which may be deemed univerſal, and belong to the firſt claſs, there is no neceſſity for diſtinguiſhing more than two genera,

Mania

Mania and Melancholia: as to the reſt, which are diſtinguiſhed by Sauvages and the other ſyſtematic writers, they properly belong to the ſecond claſs, and are to be ranked with the partial or local diſeaſes, as diſordering only a particular faculty of the mind, or a particular appetite.

I. Mania.—The memory, imagination, and judgment, are all confuſed and perverted; the paſſions and appetites are violent and outrageous, and the patients require to be reſtrained.

II. Melancholia.—The different faculties of the mind are equally confuſed and perverted as in the mania, but the predominant paſſions are fear and grief.

CHAP. XIV.

Cachexies or humoral Diſeaſes, their different Genera.

We now come to the laſt order of the univerſal diſeaſes, namely, thoſe wherein the groſs fluids are affected, as being either ſtagnant and accumulated beyond the healthy quantity, or depraved by different ſpecies of acrimony; whence, along with different ſpecies of general diſtreſs or inability, the exterior habit becomes deformed by various kinds of ſwelling, waſting, diſcolouring, or cutaneous eruption and ulceration.

The general theory will be found in the ſecond Chapter of the ſecond Book, where the poſſible cauſes of diſeaſes were explained, and we endeavoured

voured to ſhew in what manner the different animal fluids may come to ſtagnate, or accumulate either in the cellular ſyſtem or in the larger cavities, and where the different ſpecies of acrimony were pointed out, which vitiate the blood and deſtroy the texture of the ſolids.

When we come to treat particularly of the cure of humoral diſeaſes, we ſhall then give their reſpective theories; at preſent we are only to enumerate and diſtinguiſh the genera, which are as follow:

I. Polysarcia, or Corpulency.—When there is ſuch an abundance of oily fluid ſeparated from the blood, and ſtagnant in the adipoſe cells, that the motions of the nervous and vaſcular ſyſtems are proportionally impeded and interrupted; whence languor, weakneſs, ſomnolency and difficulty of breathing.

II. Dropsy.—When a ſerous or watery fluid is accumulated, either in the cellular ſyſtem at large, or in any of the three great cavities, various degrees of tumefaction enſue, accompanied with weakneſs, oppreſſion, difficulty of breathing, coldneſs, paleneſs, and other ſymptoms, which conſtitute different ſpecies and varieties, according to the place where the fluid is lodged, and other circumſtances attending the diſeaſe.

III. Jaundice.—When the bile is obſtructed in its paſſage from the gall-bladder into the duodenum it regurgitates, and being carried back into the blood, circulates with it, and tinges the ſerum; whence

whence a yellow colour is diffuſed all over the ſurface of the body, and a number of diſtreſſing ſymptoms ariſe, particularly nauſea, coſtiveneſs, waſting, of the fleſh, weakneſs, oftentimes a hiccup, and troubleſome itchineſs.

IV. Emphysema.—When the cellular ſyſtem is diſtended with elaſtic air; either from an extrication of the aerial part of the blood, or in conſequence of ſome wound of the lungs, ſo particularly circumſtanced, as to allow the air to paſs from the cavity of the thorax, into the cellular interſtices of the adjoining parts, and thence diffuſe itſelf all over the body: the tenſe, elaſtic ſwelling, and crackling upon preſſure, ſufficiently diſtinguiſh this diſeaſe from a dropſy of the cellular ſyſtem.

V. Tympany.—A ſwelling of the abdomen, from flatus. The lightneſs and tenſion of the ſwelling, and want of fluctuation, ſufficiently diſtinguiſh the tympany from a collection of water in the belly; or from the

VI. Physconia.—A hard ſwelling of the abdomen, from an enlargement of different viſcera.

VII. Atrophia, or Maraſmus.—Waſting of the fleſh, or decay, when not accompanied with febrile ſymptoms.

VIII. Osteosarcosis.—A general ſoftening of the bones, and degeneracy into a fleſhy ſubſtance, or rather more reſembling hard coagulated blood.

IX. Sarcostosis.—A general hardening of the fleſh, and degeneracy into a boney ſubſtance.

X. Ne-

X. Necrosis, or Mortification.—When the juices are ſo far vitiated in a particular part, that the circulation ceaſes, and the ſolids are corroded or waſte away.

XI. Scurvy.—A diſeaſe which prevails much in cold damp ſituations, on ſhip-board, and in garriſons, where people are often obliged to live chiefly on ſalted animal food, without a requiſite proportion of freſh vegetables. A bloated countenance, loſs of ſtrength, rotten gums, ſtraitneſs in the cheſt, and difficulty of breathing upon exerciſe, with livid or duſky ſpots on the ſkin, are the principal ſymptoms of the diſeaſe.

XII. Scrofula,—At firſt begins with indolent tumours of the lymphatic glands, eſpecially thoſe in the neck; and ſwellings of different joints: at length theſe grow painful, ſuppurate, and diſcharge a mild, curdly kind of humour; the body waſtes; and a hectic fever often ſupervenes.

XIII. Cancer.—Hard ſwellings appear in different parts, but moſt commonly in the lips or breaſts; theſe grow extremely painful; at length ulcerate and diſcharge a moſt ſharp and corroſive ichor, which eats away the fleſhy ſubſtance, and produces caries of the adjoining bones.

XIV. Lues Venerea.—A very common and infectious diſeaſe, the conſequence of impure venery. The principal ſymptoms are ulceration, generally firſt of the pudenda, then of the tonſils; copper-coloured ſcabby eruptions on the face, eſpecially

ally near the hair, and in other parts of the body, with nocturnal pains in the bones.

XV. Frambæsia; Yaws.—An infectious diſeaſe, capable of being communicated by any kind of contact; very frequent among the natives of the coaſt of Africa, (where it ſeems to have taken its riſe,) and negroes in the Weſt-Indies: the diſtinguiſhing appearances are ulcerations in different parts of the body, ſevere pain, and waſting of the fleſh, with fungous excreſcences of a red colour ſomewhat reſembling a mulberry, whence the name of the diſeaſe.

XVI. Sibbens or Sivvens.—A diſeaſe not known to the medical world until lately, (ſee 3d vol. of the Edinburgh Phyſical and Literary Eſſays, Art. XI.) equally infectious with the preceding, and not unlike it, in reſpect to many of the ſymptoms; the name was given from fungous excreſcences like raſpberries, called Sibbens in the language of the Highlands of Scotland, where the diſeaſe has been long familiar.

XVII. Morbus Vesicularis;—Seems to be the proper name for a diſeaſe that has hitherto entirely eſcaped the notice of obſervators; but a very diſtinguiſhed member of the Royal College of Phyſicians, Dublin, in the courſe of his extenſive practice, has met with four inſtances, and has favoured the author with a hiſtory which will be more particularly laid down in the practical part; at preſent, it is ſufficient to ſay that great numbers of veſicles or bliſters, of different ſizes, filled either with clear ſerum

ſerum or coloured ichor, break out all over the body, and either dry off or form little painful ulcers, and when one crop is healed up, or dries away, another, and another ſucceeds, for the ſpace of one or two years, and even longer.

XVIII. Lepra; Leproſy.—Scaley or ſcabby eruptions of different ſizes, ſometimes dry and ſometimes moiſt, deform the external habit, and produce pain, itching, reſtleſſneſs and other diſtreſſing ſymptoms.

XIX. Scabies vel Psora: Itch.—Scabby eruptions with a red baſis, ſometimes dry, and at others moiſt with a corroſive ichor which is highly infectious, break out, firſt between the fingers, and under the hams, and in the end ſpread all over the body; whence high degrees of itching, oftentimes pain, and conſequently want of reſt.

Such are the genera of cachexies, which are to be ranked with the univerſal diſeaſes, as being, for the moſt part, accompanied with prevailing degrees of pain, weakneſs, or ſome other general ſymptom. All the other cutaneous or ſuperficial diſeaſes are to be conſidered as local, and will be included in the ſixth order of the ſecond claſs.

Before we proceed to enumerate the ſeveral genera of local diſeaſes, it will not be amiſs to ſubjoin a table containing thoſe which have been already diſtinguiſhed.

GENERA

GENERA OF UNIVERSAL DISEASES.

Order I. *Fevers.*

1. Continued fever.
2. Intermittent.
3. Remittent.
4. Eruptive.
5. Hectic.

Order II. *Inflammations.*

6. External inflammation.
7. Internal inflammation.

Order III. *Fluxes.*

8. Alvine-flux.
9. Hæmorrhage.
10. Humoral diſcharge.

Order IV. *Painful Diſeaſes.*

11. Gout.
12. Rheumatiſm.
13. Oſtocopus.
14. Head-ach.
15. Tooth-ach.
16. Ear-ach.
17. Proſopalgia; Face-ach.
18. Pleurodyne.
19. Pain of the ſtomach.
20. Colic.
21. Nephralgia.
22. Cyſtalgia.
23. Iſchuria.
24. Proctalgia.

Order V. *Spaſmodic Diſeaſes.*

25. Tetanus.
26. Catochus.
27. Locked-jaw.
28. Angina Pectoris.
29. Hydrophobia.
30. Convulſion.
31. Epilepſy.
32. Eclampſia.
33. Hieranoſos.

Order VI. *Weakneſſes and Privations.*

34. Coma.
35. Palſy.
36. Fainting.

Order VII. *Aſthmatic Diſeaſes.*

37. Hydrothorax.
38. Empyema.
39. Dyſpnœa.
40. Orthopnœa.
41. Aſthma.

Order VIII. *Mental Diſeaſes.*

42. Mania.
43. Melancholia.

Order IX. *Cachexies, or humoral Diſeaſes.*

44. Corpulency.
45. Dropſy.
46. Jaundice.
47. Emphyſema.

48. Tym-

48. Tympany.
49. Phyſconia.
50. Atrophia.
51. Oſteoſarcoſis.
52. Sarcoſtoſis.
53. Necroſis.
54. Scurvy.
55. Scroſula.
56. Cancer.
57. Lues venerea.
58. Frambæſia.
59. Sibbens.
60. Morbus veſicularis.
61. Lepra.
62. Scabies.

CHAP. XV.

The ſeveral Orders of local Diſeaſes, divided into Genera, with their Deſcriptions.

HAVING had a general ſurvey of the Univerſal Diſeaſes, we now proceed to conſider thoſe which take their name and diſtinction from ſome predominant local appearance or ſymptom.

It was formerly obſerved, that in order to conſtitute what, ſtrictly ſpeaking, can be termed a Diſeaſe, a certain proportion of ſome one or more of the fifteen general ſymptoms muſt enter into the aſſemblage; yet, in the local diſeaſes, not in ſuch degrees as to obſcure the local diſorder; for this it is that here gives the diſtinguiſhing characteriſtic, and entitles them to a place in the ſecond claſs.

Hence it appears, that the theory of local diſeaſes muſt always depend on a knowledge of the particular ſtructure and uſe of the part affected, joined to a knowledge of the nature, cauſes and conſequences of the fifteen general ſymptoms.

The ſtructure and uſes of the ſeveral organs are preſumed to be known, and the theories of the general ſymptoms having been already laid down, we are under no neceſſity of entering into new diſquiſitions, little more being now required than to deſcribe the different genera which make up the eight orders of local diſeaſes.

(I.) The firſt order comprehends the diſeaſes of internal ſenſe, and of theſe there are three genera:

I. Amnesia.—Loſs of memory; this is ſometimes obſerved to happen in conſequence of certain ſpecies of fevers, or after ſome of the comata.

II. Hypochondriasis; vulgarly termed Vapours.—A diſeaſe of the imagination, wherein the patient makes a number of complaints, which are not accompanied with any correſpondent degree of diſorder in reſpect of the vital motions, nor any viſible alteration in the external habit. Flatulency, reſtleſſneſs, and a dejected anxious mind, are the uſual and moſt prevailing complaints with hypochondriac people.

Hysteria is by ſome writers conſidered as a genus, and held to be the ſame thing in women as the hypochondriaſis in men; but rather improperly, for the hyſteric temperament, which conſiſts in extreme ſenſibility, combined with great weakneſs

neſs of the ſolid texture, gives the diſtinguiſhing character and epithet to a variety of ſymptoms and diſeaſes.

III. Amentia.—Defect of reaſon, or want of the power of judging. This, like loſs of memory, has been obſerved to follow certain fevers, and the comatoſe diſeaſes.

(II.) The ſecond order comprehends the diſeaſes of the external ſenſes, which may be diſtinguiſhed into the following genera:

I. Blindness.—Of this there are different degrees, which ſometimes proceed from external diſorders of the eyelids, and coats of the eye, and ſometimes from internal cauſes, affecting the optic nerves, or deſtroying the tranſparency of the humours: whence a great number of ſpecies, known by different names, which oculiſts make a parade of diſtinguiſhing.

II. Depraved Sight.—Including the myopia, preſbytia, ſuffuſio, photophobia, vertigo, and ſome other ſpecies.

III. Deafness.—This, like the different degrees of blindneſs, may proceed either from external or internal cauſes; whence different ſpecies of the diſeaſe.

IV. Depraved Hearing.

V. Loss of Smell.—Anoſmia.

VI. Depraved Smell.—When independent of ulcers in the noſe or fauces.

VII. Loss

VII. Loss of Taste.—Agheuſtia.

VIII. Depraved Taste.—When independent of fever.

IX. Loss of Feeling.—When independent of general inſenſibility; termed Anæſtheſia or Stupor.

(III.) The third order is appropriated to the diſeaſes which diminiſh, deprave, aboliſh, or preternaturally increaſe the appetites or deſires, and conſiſts of the following genera:

I. Anorexia.—Want of appetite for ſolid food, independent of fever, or other univerſal diſeaſe. This, as was formerly obſerved, is a ſymptom in a great number of diſeaſes, but ſometimes it appears to be the primary and predominant complaint.

II. Cynorexia, or Fames Canina.—A morbid exceſs in the appetite for ſolid food.

III. Pica.—A depravation of the appetite, when the patient reliſhes only ſuch things as are not properly of the alimentary kind.

IV. Polydipsia.—Exceſſive thirſt, when not attended with fever, inflammation, flux, or dropſy, in all which diſeaſes exceſſive thirſt is to be conſidered only as a ſymptom. But, like the anorexia, polydipſia is ſometimes met with as a primary diſeaſe.

V. Satyriasis.—An inſatiable deſire for venereal enjoyments in men: perhaps hardly ever met with as an original diſeaſe, but ſometimes obſerved as a ſymptom in the hydrophobia.

VI. Nym-

VI. NYMPHOMANIA.—Furor uterinus: the ſame inſatiable deſire in women.

VII. ANAPHRODISIA.—Impotency and want of venereal deſires in males, who are of proper age for ſuch enjoyments.

[Theſe three laſt genera may, if the reader pleaſes, be referred to the ſexual diſeaſes.]

(IV.) The fourth order comprehends the diſeaſes of the different ſecretions and excretions, and includes both the increaſed diſcharges, and the ſuppreſſions. The genera are,

I. EPIPHORA.—A conſtant trickling of tears from the inner canthus of the eye, owing to ſtoppages of the puncta lachrymalia, or of the ducts which lead from them into the noſe. As theſe ſtoppages and obſtructions are produced by different cauſes, the epiphora, is diſtinguiſhable into different ſpecies.

II. CORYSA.—An increaſed ſecretion of mucus from the membranes which line the noſe, accompanied uſually with ſneezing, coughing, hoarſeneſs, and ſometimes pain or heavineſs of the head.

III. PTYALISM.—An increaſed ſecretion and diſcharge of the ſaliva, by ſpitting.

IV. ANACATHARSIS.—An increaſed ſecretion and expectoration of mucus from the glands and membranes of the larynx and bronchia, oftentimes mixed with purulent matter, neceſſarily accompanied with a cough, and ſometimes difficulty of breathing.

V. OTOR-

V. Otorrhoea.—Diſcharge of humours from the internal ear.

VI. Diarrhoea.—A looſeneſs, when not accompanied with predominant degrees of pain, loſs of appetite or weakneſs, may be conſidered as a local diſeaſe.

VII. Eneuresis.—Incontinency of urine.

VIII. Pyuria.—Purulent matter voided with the urine.

IX. Dysuria.—Difficulty in making urine.

X. Constipation;—or obſtinate coſtiveneſs.

XI. Tenesmus.—A needing or frequent inclination to go to ſtool.

XII. Dysodia.—Fetid ſweating.

XIII. Flatulence.—Frequent diſcharges of flatus from the alimentary canal, either upwards or downwards.

XIV. Aedoeopsophia.—Diſcharge of flatus from the urethra in men, or vagina in women.

(V.) The fifth order comprehends the diſorders which impede or diſturb the different actions. Hence the genera are,

I. Aphonia.—Suppreſſion of the voice, when independent of fainting, or any comatoſe diſeaſe.

II. Mutitas.—When the voice in general is not ſuppreſſed, but only an inability to utter diſtinct ſounds.

III. Paraphonia.—When the tone of voice is depraved.

IV. Dys-

IV. Dysphagia. — Difficulty of ſwallowing, when proceeding from other cauſes than inflammation.

V. Wry Neck.—Rigid contraction of the maſtoid muſcles.

VI. Angone.—A choaking, or threatened ſuffocation, when happening independent of inflammation.

VII. Sneezing.

VIII. Hiccup.

IX. Cough.

X. Vomiting.

XI. Palpitation of the Heart.

XII. Chorea.—A convulſive agitation of the muſcles of the legs and arms, obliging the patient to make motions, ſomewhat reſembling thoſe of a perſon dancing.

XIII. Trismus.—A convulſive motion of the muſcles of the lower jaw, cauſing a chattering of the teeth.

XIV. Nystagmus.—A convulſive motion of the eyelids.

XV. Cramp.—A ſudden contraction and tranſient rigidity of the muſcles in different parts, moſt commonly the legs, attended with very acute pain.

XVI. Scelotyrbe.—A permanent contraction and rigid ſtiffneſs of the muſcles of the arms and legs; often obſerved as a ſymptom of the ſcurvy.

XVII. Con-

XVII. CONTRACTION.—Stiffneſs of a particular joint, from ſpaſm.

XVIII. PARALYSIS.—Weakneſs and relaxation of the muſcles of a particular limb.

XIX. ANCHYLOSIS.—Stiffneſs of a joint, from diſorders of the bones, cartilages or ligaments.

XX. GIBBOSITAS.—Crookedneſs of the back from a diſtortion of the ribs and vertebræ; whence generally the action of reſpiration is in ſome meaſure impeded.

XXI. LORDOSIS.—Crookedneſs or diſtortion of the bones of the legs or arms, impeding their action.

XXII. HYDARTHUS.—Watery tumour of a joint, uſually termed White-ſwelling; whence different degrees of lameneſs or inability.

(VI.) The ſixth order of local diſeaſes, is an appendage to the ninth of the univerſal, and contains all thoſe ſuperficial diſorders and deformities which are not accompanied with predominant degrees of pain, weakneſs, ſickneſs, or ſome other general ſymptom. As moſt of theſe require the aid of ſurgery or topical remedies, they have been termed Morbi Chirurgici, and Superficiarii. The genera are,

I. TUMOR.—Of which there are ſeveral ſpecies, as will be ſhewn in the practical part.

II. EXCRESCENCE.—Tumours are confined within the natural teguments, and the ſkin and cuticle preſerve their texture; but excreſcences ſprout

ſprout up, or grow out from the ſurface, and have a covering or exterior appearance different from that of the common teguments. Of theſe there are different ſpecies.

III. Aneurism.—A dilatation of the coats of an artery, or a ſac formed adjoining to one, and filled with blood from the artery; eaſily diſtinguiſhed by the pulſation.

IV. Varix.—A dilatation of the coats of a vein, forming a knotty kind of irregular ſwelling.

V. Aneurismal Varix.—A compound of the two preceding; firſt obſerved by Dr. Hunter, ariſing from an accident in opening the baſilic vein: the artery being pricked, through the vein, and the two afterwards growing together, while the communicating orifice remains open, and the external one heals up, the blood from the artery flows into the vein, diſtends it, and creates a varicoſe enlargement. (See the deſcription at large in the 1ſt, 2d, and 3d vols. of the London Medical Obſervations, pages 340, 390, and 110.)

VI. Papulæ.—Reddiſh or livid tubercles, generally hard, and not ſuppurating, except with difficulty; they are ſometimes hot and itchy, or painful; in other caſes cold and indolent; whence different ſpecies.

VII. Phlyctænæ.—Veſicles, filled with pellucid or coloured ſerum.

VIII. Pustulæ.—Veſicles, having a red or inflamed baſis, and filled with a purulent or ichorous fluid.

IX. Im-

IX. Impetigo.—By this term writers generally expreſs the different ſpecies of pimples and eruptions which overſpread different parts of the body, and are vulgarly termed Scorbutic.

X. Herpes.—Cutaneous ulceration from a ſharp ichor, that ſpreads and corrodes the ſkin in different places.

XI. Ecchymosis.—Blackiſh or livid ſpots, from extravaſated blood; ſometimes from internal cauſes, but oftener from external injuries.

XII. Alopecia.—Falling off of the hair.

XIII. Trichoma, or Plica Polonica.—The hair is all matted or glued together by ſome humour which ouzes from the head; but it is doubted whether this be a diſeaſe or only the reſult of naſtineſs and ſuperſtition.

XIV. Scald Head.—Scabby eruptions, ſometimes diſcharging a purulent ichor, and ſometimes quite dry, break out all over the hairy ſcalp.

XV. Phthiriasis.—Vermin breed in cluſters under the cuticle, and burſt forth in different parts of the body.

(VII.) The ſeventh order contains thoſe diſeaſes which conſiſt in the diſlocation of different organic parts, whether hard or ſoft. There are three genera:

I. Hernia.—By this term we underſtand all the different ſpecies of ſwellings which are formed by the protruſion or falling down of the omentum, ſtomach, inteſtines, urinary bladder, and other contents

contents of the abdomen, provided they remain within the common teguments.

II. Prolapsus, or Procidentia.—When a part protrudes or falls down bare, and without defence of the outward ſkin and cuticle.

III. Luxation.—When the head of a bone is forced from its ſocket and proper connections.

(VIII.) The eighth and laſt order contains the ſolutions of continuity, whether in conſequence of external injuries, or from the force of internal acrimony, corroding the ſubſtance of the ſolids. The genera are,

I. Wound.—Which, as it may be made in various ways, inciſion, laceration, contuſion, puncture, morſure, &c. may be diſtinguiſhed into different ſpecies.

II. Ulcer.—As a wound is defined to be a recent ſolution of continuity in the ſoft or fleſhy parts, followed by bleeding, ſo an ulcer is ſaid to be a ſolution of continuity in the ſame parts, of ſome ſtanding, yielding a purulent or ichorous diſcharge. The various circumſtances and appearances attending ulcers conſtitute different ſpecies.

III. Fissure, Rhagas.—A ſolution of continuity in the ſoft parts, painful and dry.

IV. Fistula.—The term for a deep ulcer, which diſcharges a purulent ichor from a ſmall opening, with callous edges.

V. Burn

V. Burn or Scald.—A deſtruction of the texture in the ſoft parts, by fire or heated bodies, whether ſolid or fluid.

VI. Excoriation.—A rubbing off or deſtruction of the cuticle.

VII. Fracture.—Solution of continuity in the bones, from external violence.

VIII. Caries.—Corroſion or ſolution of continuity of the boney ſubſtance, from internal cauſes.

CHAP. XVI.

Genera of Sexual and Infantile Diſeaſes.

It only remains that we now diſtinguiſh the genera of thoſe diſeaſes which have been termed Sexual, becauſe of their depending on the particular ſtructure of the organs of generation, or on circumſtances diſtinctive of the two ſexes; and thoſe called Infantile, as being peculiar to the infant ſtate, alone.

It was propoſed to divide the Sexual Diſeaſes into four orders:

I. General Diseases peculiar to the male ſex only: theſe muſt be ſuch as girls or women are not liable to, and, nevertheleſs, are combinations of general ſymptoms.

II. Local Diseases peculiar only to males: theſe muſt conſiſt in diſorders of the ſeminal veſſels, penis, teſtes, and ſcrotum.

III. Ge-

III. General Diseases peculiar only to girls or women: theſe conſiſt of general ſymptoms, and depend on the different ſtates of menſtruation, pregnancy, lying-in, and nurſing.

IV. Local Diseases peculiar to the female ſex; which muſt conſiſt in diſorders reſpecting the ovaria, uterus, vagina, and os externum.

DISEASES PECULIAR TO MALES.

The Febris Teſticularis, which is a fever that terminates in a painful ſwelling of one or both teſticles, and the Tabes Dorſalis, which is a conſumption brought on by venereal exceſſes, and uſually accompanied with pain and weakneſs in the loins, and frequent emiſſions or continual dripping of ſeminal fluids, are perhaps the only diſeaſes that can be called General, and yet be conſidered as peculiar to men alone: but as to local diſeaſes, there are,

I. Dyspermatismus.—A difficulty or inability of emiſſion.

II. Gonorrhoea Simplex.

III. Gonorrhoea Virulenta.

IV. Priapism.—Of which the chordee is a ſpecies.

V. Phymosis.

VI. Paraphymosis.

VII. Chrystalline.

VIII. Hernia Humoralis.

IX. Hy-

IX. Hydrocele.

X. Sarcocele.

XI. Cirsocele.

Theſe terms having been already explained, we ſhall not detain the reader with a repetition, but go on to diſtinguiſh the genera of

DISEASES PECULIAR TO FEMALES.

The general diſeaſes are,

I. Amenorrhoea.—Defect or ſuppreſſion of the menſtrual diſcharge; whence various ſymptoms, formerly explained.

II. Chlorosis.—A frequent diſeaſe with girls who lead ſedentary lives. The patient falls away, yet looks full in the face, though pale and bloated; the ſtrength fails; the leaſt exerciſe raiſes a palpitation of the heart and difficulty of breathing; there is either no appetite for food, or a depraved one for acrid and earthy ſubſtances, which can yield no nouriſhment.

III. Menorrhagia.—A too profuſe or too frequent flow of the menſes, inducing weakneſs, waſting, paleneſs, pain in the loins, coldneſs, and loſs of appetite.

IV. Leucorrhoea, vulgo Fluor Albus.—An humoral diſcharge from the uterus and vagina; various in its colour, conſiſtence, and degrees of ſharpneſs. Symptoms ſimilar to thoſe which ſucceed the menorrhagia are apt to enſue.

V. Hys-

V. Hysteralgia.—Pain in the uterus, for the moſt part, accompanied with a ſenſe of weight or bearing down. As theſe complaints may ariſe from various cauſes, there are different ſpecies of hyſteralgia.

VI. Graviditas.—Pregnancy in delicate habits is attended with ſo many ſpecies of complaints, that it may well be conſidered as a genus of diſeaſe.

VII. Abortus.—Abortion or premature birth is always to be conſidered as a diſeaſe.

VIII. Dystocia; Partus difficilis.—Difficult labour, as being a deviation from the natural ſtate, and apt to be accompanied or followed by variety of diſtreſſing complaints, is alſo to be held as a genus of diſeaſe.

IX. Febris Puerperalis.—Though the fevers which ſucceed delivery, and attend the coming of the milk, are, in general, mild, and not accompanied with danger, yet ſometimes women in childbed are ſeized with a fever that of late has engaged the attention of the faculty, and been conſidered as peculiar to that ſituation; it is accordingly termed the Puerperal Fever; and in ſome places, and ſeaſons, has proved remarkably fatal: the diſtinguiſhing ſymptom is a fixed pain in the belly, accompanied with tenſion, and ſuch foreneſs of the integuments that the patient can ſcarcely bear to be touched. Diſſections ſhew the omentum in particular to have been in an inflamed ſtate.

The Local Diſeaſes peculiar to women conſiſt of the following genera:

I. Hydrops Ovarii.

II. Scirrhus Ovarii.—It is next to impoſſible in the living ſubject to diſtinguiſh a dropſy of the ovarium from a ſcirrhous enlargement; and therefore theſe diſeaſes will be confounded, and uſually paſs for ſpecies of the Phyſconia.

III. Hydrometra.—Dropſy of the uterus, is ſometimes connected with pregnancy, and ſometimes the watery fluid alone is ſhut up in the cavity of the womb.

IV. Physometra.—Flatulent diſtenſion of the uterus.

V. Prolapsus Uteri, ſeu Procidentia.—Falling down of the womb.

VI. Retroversio Uteri.—(See the caſes in the 4th and 5th vols. of the London Medical Obſervations and Inquiries.)

VII. Prolapsus Vaginæ.

VIII. Polypus Vaginæ.—Fleſhy excreſcences have been obſerved to grow up, both from the internal ſurface of the uterus and from the vagina.

IX. Hydrops Labiorum Pudendi.

X. Ecchymoma Labiorum.—(See two caſes in the 5th vol. of the London Medical Obſervations, Art. VIII.)

XI. Mas-

XI. Mastodynia.—Pain in the breaſts: of which there are different ſpecies according to the ſources from whence it may ariſe.

INFANTILE DISEASES.—During the infant ſtate the alimentary canal is more apt than at any other period to be loaded with acrid and offenſive matters, and this gives a peculiarity to their fevers, fluxes, and convulſions, which requires particular attention.

The general diſeaſes which may be conſidered as proper to infants are,

I. Colica Meconialis.—The griping which is apt to diſtreſs children newly born, from a retention of the meconium.

II. Colica Lactentium.—The griping attended with coſtiveneſs, which ſo commonly afflicts children on the breaſt.

III. Diarrhoea Infantum.—The looſeneſs in children, which, for the moſt part, is occaſioned by an acid ſaburra; the ſtools are green and curdly.

IV. Aphthæ.—Theſe whitiſh ſloughs which break out on the lips, tongue, and fauces, and look like an ulceration, have been already deſcribed. The child refuſes the breaſt, and ſeems oppreſſed with ſleep.

V. Eclampsia Infantum.—The convulſions of infants, ariſing from acrid matters in the alimentary canal, or from teething.

VI. Atrophia Infantum.—The belly grows large, the limbs waſte, hectic heats comes on, and death generally enſues.

VII. Rachitis; Rickets.—The limbs grow feeble, and unable to ſupport the weight of the body; the joints ſwell, the bones loſe their hardneſs, and bend; the ſize of the head is out of proportion; the fontanelle remains open, and oftentimes the ribs and vertebræ of the back are diſtorted.

The Local Diſeaſes of children are,

I. Imperforation of the natural paſſages.

II. Anchyloglossum.—Tying of the tongue.

III. Aurigo Infantum; Yellow gum.—A ſlight degree of jaundice, very frequently obſerved in new born infants. It always wears off, in the courſe of eight or ten days, without appearing to have done the leaſt injury to the conſtitution.

IV. Purpura Infantum; Red gum.—An eruption of very ſmall red pimples, which is always conſidered as a ſalutary appearance in new born infants, and generally continues, more or leſs, for the firſt month or two.

V. Crusta Lactea.—A ſcabby eruption which breaks out on the head, and ſometimes ſpreads to the face.

The following table of the ſeveral genera of local, ſexual, and infantile diſeaſes being added to the former one, containing thoſe of the firſt claſs, will exhibit a general view of the morbid ſtate.

GENERA

GENERA OF LOCAL DISEASES.

Order I. *Diſeaſes of the Internal Senſes.*

1. Loſs of memory.
2. Hypochondriaſis.
3. Loſs of judgment.

Order II. *Diſeaſes of the External Senſes.*

4. Blindneſs.
5. Depraved ſight.
6. Deafneſs.
7. Depraved hearing.
8. Loſs of ſmell.
9. Depraved ſmell.
10. Loſs of taſte.
11. Depraved taſte.
12. Loſs of feeling.

Order III. *Diſeaſes of the Appetites.*

13. Anorexia.
14. Cynorexia.
15. Pica.
16. Polydipſia.
17. Satyriaſis.
18. Nymphomania.
19. Anaphrodiſia.

Order IV. *Diſeaſes of the Secretions and Excretions.*

20. Epiphora.
21. Coryza.
22. Ptyaliſm.
23. Anacatharſis.
24. Otorrhœa.

24. Otorrhœa.
25. Diarrhœa.
26. Incontinency of urine.
27. Pyuria.
28. Dyſuria.
29. Conſtipation.
30. Teneſmus.
31. Dyſodia.
32. Flatulence.
33. Ædœopſophia.

Order V. *Diſeaſes impeding or diſturbing different Actions.*

34. Aphonia.
35. Mutitas.
36. Paraphonia.
37. Dyſphagia.
38. Wry neck.
39. Angone.
40. Hiccup.
41. Sneezing.
42. Cough.
43. Vomiting.
44. Palpitation.
45. Chorea.
46. Triſmus.
47. Nyſtagmus.
48. Cramp.
49. Scelotyrbe.
50. Contraction.
51. Paralyſis.
52. Anchyloſis.
53. Gibboſitas.
54. Lordoſis.
55. Hydarthus.

Order

Order VI. *Diſeaſes of the External Habit.*

56. Tumor.
57. Excreſcence.
58. Aneuriſm.
59. Varix.
60. Aneuriſmal Varix.
61. Papulæ.
62. Phlyctænæ.
63. Puſtulæ.
64. Impetigo.
65. Herpes.
66. Ecchymoſis.
67. Alopecia.
68. Trichoma.
69. Tinea.
70. Phthiriaſis.

Order VII. *Diſlocations.*

71. Hernia.
72. Prolapſus.
73. Luxation.

Order VIII. *Solutions of Continuity and Deſtruction of Texture.*

74. Wound.
75. Ulcer.
76. Rhagas.
77. Fiſtula.
78. Burn.
79. Excoriation.
80. Fracture.
81. Caries.

GE-

GENERA OF SEXUAL DISEASES.

Order I. *General, proper to Men.*

1. Febris teſticularis.
2. Tabes dorſalis.

Order II. *Local, proper to Men.*

3. Dyſpermatiſmus.
4. Gonorrhœa ſimplex.
5. Gonorrhœa virulenta.
6. Priapiſm.
7. Phymoſis.
8. Paraphymoſis.
9. Chryſtalline.
10. Hernia humoralis.
11. Hydrocele.
12. Sarcocele.
13. Cirſocele.

Order III. *General, proper to Women.*

14. Amenorrhœa.
15. Chloroſis.
16. Leucorhœa.
17. Menorrhagia.
18. Hyſteralgia.
19. Graviditas.
20. Abortus.
21. Partus difficilis.
22. Febris puerperalis.

Order IV. *Local, proper to Women.*

23. Hydrops ovarii.
24. Scirrhus ovarii.

25. Hydro-

25. Hydrometra.
26. Phyſometra.
27. Prolapſus uteri.
28. Retroverſio uteri.
29. Prolapſus vaginæ.
30. Polypus uteri, ſeu vaginæ.
31. Hydrops labiorum pudendi.
32. Ecchymoma labiorum.
33. Maſtodynia.

GENERA OF INFANTILE DISEASES.

Order I. *General, proper to the Infant State.*

1. Colica meconialis.
2. Colica lactentium.
3. Diarrhœa infantum.
4. Aphthæ.
5. Eclampſia infantum.
6. Atrophia infantum.
7. Rachitis.

Order II. *Local, proper to the Infant State.*

8. Imperforatio.
9. Anchyloglofſum.
10. Aurigo infantum.
11. Purpura infantum.
12. Cruſta lactea.

Total of Genera.

Univerſal,	———	62
Local,	———	81
Sexual,	———	33
Infantile,	———	12
		188

In order to render the foregoing Method of Claſſing Diſeaſes ſtill more eaſy and intelligible, an abſtract of the reſpective Methods of *Sauvages*, *Linnæus*, *Vogel*, and *Cullen*, is added, as an Appendix to the preſent Volume.

A METHO-

A

METHODICAL INTRODUCTION

TO THE

THEORY

OF THE

ART OF MEDICINE.

BOOK IV.

SEMEIOLOGY; OR, THE DOCTRINE OF SIGNS.

CHAP. I.

Signs of Diſeaſes in General.

HAVING finiſhed our general view of the morbid ſtate, we enter on that part of the medical ſyſtem termed Semeiology, or the Doctrine of Signs, explaining the methods whereby we are enabled to form a judgment, either of the preſent ſtate of a diſeaſe, or of the way in which it will terminate.

It is not an uncommon thing in the medical writings to ſee ſigns that are purely ſuch, confounded with the ſymptoms which make a part of the diſeaſe.

For though all ſymptoms are ſigns, yet all ſigns are not ſymptoms; as, for inſtance, a quick pulſe,

pulſe, and high-coloured urine are ſigns of a fever, provided the perſon who has ſuch a pulſe, or makes ſuch urine, is at the ſame time affected with the ſymptoms of exceſſive heat, thirſt, loſs of appetite, weakneſs, and reſtleſſneſs; if he has not all, or moſt of theſe ſymptoms, then the quick pulſe and high-coloured urine infer nothing, ſince it often happens that theſe ſhall occur without being attended with any one ſpecies of morbid inability or diſtreſs.

As the ſymptoms are the component parts of the diſeaſe, they muſt of courſe be the true ſigns, ſo that we only feel the pulſe and inſpect the urine in aid of theſe ſigns; for if the urine and pulſe be conſidered without reference to the ſymptoms, they can never enable us to form any judgment concerning either the nature or actual ſtate of a diſeaſe; as for example, we are told that a perſon is afflicted with a ſharp and fixed pain in the ſide, increaſing upon inſpiration, and accompanied with a teazing cough, exceſſive heat, thirſt, and reſtleſſneſs; now, we know that this combination of ſymptoms forms the diſeaſe called a Pleuriſy, and therefore will not heſitate to pronounce that this is the ſpecies which the ſick perſon labours under; but if we are only told that the pulſe is quick and full, or that the urine is high-coloured, then we cannot tell with any degree of certainty whether there be a diſeaſe, or whether the perſon has only overheated himſelf with violent exerciſe. *

Signs

* In former times, when medical and philoſophical knowledge were leſs diffuſed than at preſent, people were made to believe, that it was poſſible, from mere inſpection of the urine,

Signs are diſtinguiſhed as being either diagnoſtic, prognoſtic, or anamneſtic.

Diagnoſtic ſigns aſſure us of the preſent ſtate of a diſeaſe, and ſerve to define or diſtinguiſh it. Thus, exceſſive heat, ſevere pain in the head, great thirſt, and reſtleſſneſs, with a dry ſkin, an extremely frequent, full, and hard pulſe, and high-coured urine, are the diagnoſtic ſigns of that ſpecies of fever which is termed an inflammatory fever.

Prognoſtic ſigns are thoſe which enable us to foretell the changes that will happen during the courſe of the diſeaſe. Thus, if a perſon labouring under an inflammatory fever, complains that the pain of the head is become extremely violent, with a buzzing in the ears, a redneſs and fierce look in the eyes, and the urine changes to a watery paleneſs, we may ſafely venture to prognoſticate that a delirium will immediately ſupervene.

Anam-

urine, not only to tell what diſeaſe the party laboured under, but alſo to lay down methods of cure; and in conſequence of this perſuaſion, every great town had its water-doctor, or conjurer, who levied contributions on the credulity of the vulgar. The race of theſe Ouroſcopi was univerſally believed to have been extinct, until this preſent year 1776, that a very ſucceſsful one has ſtarted up in London, and, to the amazement of foreigners, who ſeem to conſider the Engliſh as a nation of philoſophers, has been conſulted by multitudes of all ranks.

This fellow, who is a German, has two or three confederates from the ſame country, who act as apothecary and ſervants, and aſſiſt in carrying on the cheat; the whole group, no doubt, laugh exceedingly at the folly of the good people of England.

Anamneſtic ſigns are thoſe which enable us to tell what diſeaſe the party is juſt emerged from; for inſtance, a ſcurfy dryneſs of the ſkin, with ſore eyes, a troubleſome dry cough, and weakneſs, ſhew the perſon ſo affected has lately had the meaſles.

It is ſufficiently obvious, however, that theſe anamneſtic ſigns are not of much importance, even if they were more to be depended on than they really are; the knowledge of the diagnoſtic and of the prognoſtic is what we are principally to cultivate.

The chief diagnoſtic ſigns of the whole firſt claſs of diſeaſes are the fifteen general ſymptoms; when we find two or more of theſe combine together, and prevail throughout the whole, or greateſt part of the courſe of the diſeaſe, they ſerve to aſſure us that the diſeaſe is one of thoſe which muſt be intitled an Univerſal Diſeaſe. As to the ſigns of the ſeveral ſpecies, they ſhall be laid down hereafter, when theſe come to be particularly deſcribed.

The diagnoſtic ſigns of the ſecond claſs of diſeaſes will be underſtood from the deſcription of the partial or local ſymptoms, which diſtinguiſh and give them the various names, according to the different parts which are affected.

The ſymptoms then are the genuine diagnoſtic ſigns of diſeaſes; but many of theſe ſymptoms are ſuch as can neither be ſeen nor felt, and therefore what knowledge we have of them muſt come either

either from induction, or from information given by the patient: it very often happens, however, that patients are incapable of diſtinctly telling the complaints under which they labour; and hence the improvers of phyſic have fallen upon certain methods to ſupply theſe deficiencies, and for enabling thoſe who attend the ſick to form a judgment with reſpect to the preſent and future ſtate of diſeaſes, and this by attending to the ſtate of the animal motions; for the more they depart from that moderate, equable, and free rate, which conſtitutes perfect health, ſo much the more diſtreſſing and dangerous muſt be the ſtate of the ſick perſon.

The motions of the nervous ſyſtem being totally beyond the reach of obſervation, we can know nothing of this part of the corporeal frame but from obſerving the ſtate of the different organs of ſenſe and inſtruments of voluntary motion, together with the appearances of the eyes and of the whole countenance.

But as the motions of the vaſcular ſyſtem are evident, and depend on the heart as the firſt mover, we can readily tell at any time whether the general circulation be carried on as it ought to be, and may judge, with a conſiderable ſhare of certainty, concerning the degrees of diſorder or interruption, and this by examining the pulſe, and by obſerving how reſpiration is performed.

CHAP.

CHAP. II.

Signs derived from the Pulſe.

IT has hitherto been generally ſaid and believed, that the very ancient phyſicians availed themſelves but little of the obſervations which may be made of the pulſe, and that there is only ſlight mention of it in the writings which paſs under the name of Hippocrates; but profeſſor de Haen, who ſeems almoſt to worſhip the parent of phyſic, and deems it injurious to the honour of Hippocrates, that he ſhould not be allowed to know as much concerning the pulſe as any of thoſe who have come after him; has quoted above forty different paſſages wherein mention is made of pulſes and pulſations. But whether thoſe amount to a full proof of the point which the profeſſor labours to eſtabliſh, ſhall be left to the reader who peruſes the firſt chapter of the twelfth part of his Ratio Medendi.

Aretæus, indeed, from the extracts given by de Haen, appears to have attended a good deal to the changes of the pulſe; but whatever omiſſions in regard to this matter may be chargeable on Hippocrates, are amply made up by the luxuriant fancy of his commentator, Galen, who has formed an extravagant number of diſtinctions, moſt of which do not occur in practice; or if they did, they could not be known from the deſcriptions which are given: much the ſame thing may be ſaid in regard to the doctrines of ſome modern writers,

writers, who have perſuaded themſelves that there are peculiarities of the pulſe from which one may foretell many things with reſpect to the progreſs and event of diſeaſes.

Theſe peculiarities, which can only be obſerved by a very attentive head, and a very nice touch, are not to be learnt from books; and if there be ſuch pulſes, as Solano, Bordeu, and their followers, have told of, the perſons who are deſirous of learning how to diſtinguiſh them muſt attend the practice of theſe gentlemen, and be taught, at the patient's bedſide, how to know the minute variations from thoſe ſtates of the pulſe which are obſerved by common practitioners.

Before we draw any concluſions from the ſtate of the pulſe, we are always to conſider that the healthy rate is relative to the particular circumſtances of age, ſex, and conſtitution: in the firſt place therefore we ſhould, if poſſible, find out what the healthy rate is, as that muſt be the ſtandard whereby to judge of the degree of morbid deviation.

We are alſo to conſider that the vaſcular ſyſtem is but a part of the animal machine, and though, from the pulſe, we may infer there is no diſorder in reſpect to the general circulation, becauſe we find the motions to be moderate, equable, and free, yet that does not aſſure us that every thing is well on the part of the nervous ſyſtem, as there may be very much diſturbance there, while little or none ſhall be perceived from the pulſe.

Perſons who mean to apply to the practice of phyſic ſhould make themſelves acquainted with the degrees of ſtrength, and general rates of the pulſe, as felt in infants, adults, and aged men, and in women, while in perfect health, ſince all theſe have their own peculiar healthy rate.

During perfect health, the pulſe will be found equable, moderate, and free, whereas in the morbid ſtate, we ſhall ſometimes find it unequal and intermitting; the time between the ſtrokes, as well as the force of the ſtroke, every now and then varying; ſometimes it will ſtop entirely, ſometimes it will be found immoderately quick, and ſometimes unnaturally ſlow; ſometimes it will be raiſed greatly above the healthy degree of ſtrength, and ſometimes ſunk as much below it.

The inferences to be drawn from theſe different ſtates of the pulſe are in general the following:

From the unequal or intermittent pulſe we are to infer that there is great diſorder in the nervous ſyſtem, and conſequently muſt look on this kind of pulſe as an alarming ſign, and one that ought always to put us on our guard, and prepare to expect the very worſt that can happen. The degree of danger ſhould be eſtimated, however, from the circumſtances that have preceded, or which may attend this uneven or intermittent pulſe; for, if it comes at the cloſe of a fever, when the ſtrength is much exhauſted, or after large evacuations of any ſort, we may look on it as a deſperate ſign; but if it happens only after ſome ſudden guſt of paſſion, or is in any degree habitual,

habitual, (as hath ſometimes been obſerved) then we need not be ſo much alarmed.

An entire ſtoppage of the pulſe muſt always be deemed very alarming, if it continues any time, or if it ſucceeds profuſe hæmorrhages, or other diſcharges; if there be any circulation while the pulſe ceaſes to be felt, it muſt be owing to the ſimple contraction and dilatation of the heart, without any conſiderable degree of ſubſultory motion.

Some writers diſtinguiſh between a quick pulſe and a frequent; by a frequent pulſe they mean, that there is an unuſual number of ſtrokes in a given ſpace of time; and by a quick pulſe they underſtand that the ſtroke is made with remarkable ſmartneſs, in the ſmalleſt portion of time that can be conceived: the epithet hard ſeems rather to expreſs this matter better than quick, and therefore we ſhall apply it to ſignify that ſtroke of the pulſe which is made in ſuch a ſmart way, and is accompanied with ſuch tenſion in the coats of the artery, that it gives the idea of ſomewhat hard lying under the finger.

From the pulſe that is immoderately quick or frequent, we may infer that there is an unuſual irritation kept up in the vaſcular ſyſtem, either from acrid matters contained in the blood, which ſtimulate the heart and the arteries; or from the ventricles not being able to empty themſelves completely, whence they are kept in a conſtant ſtate of irritation; the ventricles of the heart may want power for enabling them to contract ſufficiently, or the extremities of the arterial ſyſtem may be ſo conſtricted or cloſed up, that the blood is too much

accumulated about the center, or it may be returned from the circumference faſter than it ought to be, and in greater quantities than the heart can well receive it, as always happens after violent or unuſual bodily exerciſe; hence we may underſtand the reaſon why all profuſe evacuations quicken the pulſe; for, in people who die in conſequence of ſuch, the pulſe, as death draws near, becomes exceedingly frequent, becauſe the muſcular force of the heart is now ſo greatly weakened, that the ventricles can never ſufficiently clear themſelves; as alſo, why every thing that cauſes ſpaſmodic conſtriction muſt quicken the pulſe: and thus we ſee, that a quick pulſe muſt be inſeparable from a fever, as long as the arteries at the circumference are in any conſiderable degree conſtricted or obſtructed.

A frequent or quick pulſe, conſidered merely as ſuch, does not imply that the circulating force of the blood is increaſed, or that any given quantity of it moves through a greater ſpace of the containing veſſels in a given time, than it did before the pulſe became more frequent than it ought to be in the natural ſtate.

The circulating force of the blood is to be eſtimated by multiplying the ſtrength of the pulſe into the number of ſtrokes in a given portion of time. For the ſake of illuſtration, let us eſtimate the ſtrength of the pulſe in the time of perfect health as equal to four, while the number of ſtrokes in a minute are ſeventy; 70 multiplied by 4, gives 280;

280 then, we ſhall ſay, is the circulating force in the time of perfect health.

Now let us ſuppoſe an inflammatory fever to ariſe, and that the ſtrength of the pulſe is increaſed to 5, while the number of ſtrokes in a minute is increaſed to 112; theſe two numbers being multiplied into each other, produce 560, which is double what the circulating force was during the natural and healthy ſtate.

But let us ſuppoſe the number of pulſes in a minute to be ſtill 112, and the ſtrength of the ſtroke to be reduced one-half below the healthy ſtandard; that is, we ſhall reckon it only 2 inſtead of 4, then the product will only be 224, which is greatly below the healthy rate. Thus we ſee, that notwithſtanding the pulſe is ſo much more frequent, yet the maſs of blood does not circulate with ſuch freedom and velocity as it did while the heart contracted itſelf only 70 times in a minute inſtead of 112.

When we find the pulſe unnaturally ſlow, we infer that the heart and arterial ſyſtem are leſs irritable than they ought to be, which may happen from a want of proper ſupply of ſubtile nervous fluid to enliven the fibres, as ſeems to be the caſe when the veſſels or ventricles of the brain are ſurcharged with blood or ſerum; or when it is preſſed upon by the ſcull, beat in or fractured: the irritability of the heart may alſo be leſſened, and the power of its fibres weakened, from an accumulation of oily, gelatinous, or watery fluid in the cellular interſtices, as happens in the caſes of over-corpulent or hydropic habits; or from the too great acceſſion of

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inert ſolid matter, which ſeems to be the caſe with people advanced in life, in whom the living ſolids are obſtructed in their motions, by the gradual increaſe of inert ſolids.

As mere quickneſs or frequency of the pulſe does not imply that the circulating force of the blood is increaſed, neither does mere ſlowneſs prove that it is diminiſhed; ſo that we are to form our judgment here on the ſame principles as we did with reſpect to the other: as for inſtance, if the pulſe of a perſon who is juſt recovering from a fever ſhall become ſo ſlow as to beat only 56 times in a minute, while the ſtrength of each ſtroke or impulſe ſhall continue ſo great as to be eſtimated at 5, then we ſee by the product, which is 280, that the circulating force is preciſely the ſame with what it was in the time of perfect health, when we eſtimated the ſtrength at 4, and the number of pulſes at 70.

Hence we may underſtand the reaſon why a ſtrong and a ſlow pulſe, provided it be equable, is ſuch a good ſign, when it ſucceeds that which has been weak and frequent; and why we look on ſuch a pulſe as a ſure token that the criſis of a fever has been complete, and that perfect equability and freedom are again reſtored to the circulation throughout every part of the arterial ſyſtem.

A ſtrong pulſe ſhews that the influx of nervous fluid to the heart is perfectly free, and that the fibres of this muſcle, and of the arterial ſyſtem in general, are firm and entire, while the blood which the veſſels contain will be found remarkably denſe, and

rich

rich in the colouring part; on the contrary, a weak pulſe muſt denote want of power in the heart and vaſcular ſyſtem in general, ariſing from a relaxed and flabby ſtate of the ſolids, joined to a poor, thin, and watery ſtate of the blood.

The hardneſs of the pulſe, which is peculiar to ſome diſeaſes, particularly inflammations of the membranous parts, which are accompanied with ſevere pain, is ſuppoſed to ariſe from an unuſual degree of tenſion communicated to the motory fibres in general; extreme ſoftneſs, on the contrary, muſt be aſcribed to the oppoſite ſtate of the living fibres, and muſt be conſidered only as a ſlight variation from the weak pulſe.

From reviewing what has been ſaid concerning the ſeveral ſtates of the pulſe, as conſidered ſeparately, we may eaſily infer what follows from their ſeveral combinations; thus, a quick, hard, and ſtrong pulſe, plainly denotes that the heart and arterial ſyſtem are greatly irritated; that there is much tenſion of the motory fibres in general, and that the veſſels are full of blood, which is uncommonly denſe, and ſtored with the red particles.

Thus much may ſuffice concerning the pulſe, with reſpect to the morbid ſtate in general; when we come to deſcribe particular ſpecies of diſeaſes, there will be a neceſſity for taking further notice of it, as it is found to be affected in different caſes.

CHAP.

CHAP. III.

Signs derived from Reſpiration.

AS the whole maſs of circulating fluids muſt neceſſarily paſs through the pulmonary veſſels in its progreſs from the one ventricle of the heart to the other, we may readily comprehend that the ſigns derived from the pulſe ſhould be confirmed by thoſe which are taken from reſpiration.

While people enjoy perfect health, reſpiration is carried on ſo as to give eaſe and refreſhment, and with ſuch a gentle motion of the different parts concerned, that the riſing and falling of the ribs is ſcarcely to be perceived; the cavity of the thorax being alternately enlarged and diminiſhed, chiefly by the alternate relaxation and contraction of the diaphragm and muſcles of the abdomen. But in diſeaſes we often obſerve the reſpiration to be much diſturbed and interrupted, being performed with pain, difficulty, quickneſs, a perceivable noiſe, and an evident motion of the ribs. All theſe different deviations from the healthy ſtate are to be uſed as ſigns, to enable us to judge concerning the degrees of diſturbance and interruption in regard to the general circulation. For the lungs may be conſidered as an epitome of the whole body, with reſpect to its vaſcular compoſition; this viſcus having as many ſeries of veſſels, and therefore the blood which flows freely through the veſſels of the lungs may be ſuppoſed capable of making an eaſy circuit through the remainder of the ſanguiferous canals.

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In health, it is generally obſerved, that we make but one inſpiration, for four times that the heart contracts itſelf: hence we may infer from a reſpiration which is quicker than uſual, that the blood is ſent out from the heart into the pulmonary arteries in great abundance, owing ſometimes to its being returned from the circumference to the center in unuſual quantities, as is always the caſe after violent bodily exerciſe, and ſome particular paſſions of the mind; and hence it is, that ſpaſmodic conſtriction always quickens the reſpiration. When the circulation through the lungs is any how interrupted, as they cannot afford a paſſage to the uſual quantity of blood from one dilatation, the defect muſt be compenſated by a repetition; hence we ſee, that quick reſpiration may be held as a ſign of infarcted lungs, and theſe infarctions, as hath been already mentioned, may be of various natures. The reſpiration alſo will be quickened, if the muſcles concerned in this action (eſpecially the diaphragm) be agitated with any degree of ſpaſm: and this is a caſe that often happens in hyſteric patients, from flatus or other offenſive matters pent up in the ſtomach or inteſtines; and in infants, from a load of coagulated milk, or other ſtimulating or oppreſſive materials.

A laborious or difficult reſpiration, wherein the breathing is not only quick, but the thorax not ſufficiently enlarged, is a ſign that the paſſage through the pulmonary veſſels is very much interrupted, either by a ſpaſmodic ſtricture of theſe veſſels, or (if the notion of lentor be admitted) from a too great tenacity of the blood, which cannot eaſily make

make its way through the minute extremities of the pulmonary artery; or difficult breathing may denote that there is an accumulation of watery, oily, or perhaps earthy matter in the cellular part of the lungs; whereby the air-veſſels, as well as the blood-veſſels, are compreſſed, and the one ſet hindered from being ſufficiently diſtended with air, while the others are ſtraitened in their diameters: hence the paſſage of the circulating fluids muſt be interrupted in proportion to the quantity of matter ſo accumulated.

Reſpiration, attended with a fixed internal pain, which is very acute and diſtreſſing, is a ſign that the membranous covering of the lungs, and the membranes which line the thorax, are in a ſtate of inflammation, the veſſels ſpread over theſe parts being over-diſtended, and nearly ruptured, by the load of fluids which are forced into them; if a laborious and very difficult reſpiration be attended with a dull deep-ſeated pain, and quick, but weak pulſe, it ſhews the ſubſtance of the lungs to be inflamed.

But if the pain which attends difficult reſpiration be in the fleſhy and external parts of the cheſt, and is not fixed, but flies like a cramp from place to place, the pulſe at the ſame time being little diſturbed, it is a ſign that there is ſome ſpaſmodic affection, which will probably be relieved by an opiate; or rheumatic acrimony, which will give way to the application of a bliſter.

A quick and difficult reſpiration, with a ſobbing or rattling in the fauces, if it ſucceeds other bad ſigns,

ſigns, ſuch as a frequent and very weak pulſe, cold ſweats, inſenſibility, or total loſs of ſtrength, may be looked on as a ſign of approaching death.

As difficulty and diſturbance in regard to the action of reſpiration may be brought on by a great variety of cauſes, many of which, in themſelves, have but little of diſtreſs or danger, we can never infer any thing with certainty from the ſigns of reſpiration alone, but muſt always take into the account the other ſymptoms and circumſtances attending the patient, and by laying the whole together, draw the proper concluſions: for inſtance, we ſhall often ſee perſons of a very delicate habit, endowed with much ſenſibility, fall into great diſtreſs in regard to reſpiration, from cauſes that affect only the muſcles concerned in this action, and which do not much interrupt or diſturb the paſſage of the blood through the lungs; conſequently, though very alarming at firſt ſight, it is not to be held as a ſign of much danger; for while the paſſage through the pulmonary veſſels keeps tolerably free, (and this may be always known from the pulſe) we are not to look on difficult reſpiration as a ſign of approaching death; but if a ſuffocating or exceedingly difficult reſpiration ſhould come on, when we know from other circumſtances that the lungs are in a ſtate of inflammation, or are ſtuffed up and incumbered with watery, mucous, oily, ſanguineous, or purulent matter, then we are to eſteem it as a very bad ſign, and prepare for the worſt.

When we come particularly to treat of thoſe diſeaſes wherein difficulty of breathing is the diſtinguiſhing

guiſhing ſymptom, we ſhall then point out more diſtinctly the caſes wherein the diſtreſs ariſes from infarcted or incumbered lungs, and thoſe wherein it is owing merely to affections of the nerves beſtowed on the muſcles ſubſervient to reſpiration.

As there are accidental or conſtitutional peculiarities of pulſe, which are always to be attended to, in like manner we are ſtill to conſider that reſpiration is liable to vary much in different people, according to their different conſtitutions, alſo according to the different formation of the thorax, and the particular ſtate of the lungs; to which we muſt add, the different effects that may be expected from changes of weather, and from the differences of climate and ſituation.

CHAP. IV.

Signs which denote Diſorder in the Nervous Syſtem.

WE know from a multitude of obſervations, and from experiments on living animals, that ſenſation, perception, and voluntary motion, all depend on the ſound ſtate of the nerves; therefore when at any time we find the different external ſenſes, the faculties of the mind, or the powers of the muſcular fibres impaired, diſordered, or ſuſpended, we may be then certain that all is not right with reſpect to the nervous ſyſtem; and by comparing the various morbid deviations with the ſtates of ſenſation, perception, and voluntary motion, as they ought to be in the healthy ſubject, we may be enabled to form ſome notion of the ſeveral degrees of morbid diſtreſs and danger. As, for inſtance, a

perſon

perſon in a fever is very delirious, and unable to ſleep; the actual cauſe of theſe two ſymptoms, we preſume to be a too plentiful diſtribution of the nervous fluid to the organs of ſenſe, both internal and external: therefore, on obſerving theſe two ſymptoms, we infer that the increaſed force of the circulating fluids, which conſtitutes the fever, has alſo produced an increaſed ſecretion of nervous fluid, and that this ſubtile matter is now ſent into the nerves in a too great proportion. Hence alſo we conclude, if theſe two ſymptoms continue to rage with violence, that the ſick perſon's life muſt be in very great danger, becauſe of the extraordinary waſte of this enlivening fluid, without a due ſhare of which the animal motions cannot poſſibly be carried on.

But if the ſame perſon in the courſe of this fever becomes ſtupid, and ſinks into a conſtant doſing, then we are to infer that the nerves are not ſufficiently ſupplied, and that their motions are become remiſs, by reaſon of the blood-veſſels of the brain being over-diſtended, or perhaps ruptured, from the continuance of the violent and rapid motion of the circulating fluids: and hence again we prognoſticate the dangerous ſituation of the patient, from the appearance of theſe two acceſſory ſymptoms.

On the ſame principle we always infer great danger from ſpaſms, when joined with diſorder of the vaſcular ſyſtem, or from extreme weakneſs of body, or dejection of ſpirit, than which there cannot be more alarming ſigns when they appear in any ſpecies of febrile diſeaſe.

It

It was formerly laid down, that the nerves are equally liable to be affected at their origin in the brain, and by offenſive matters acting on the places where particular cords terminate, which communicate by ſome inexplicable ſympathy the diſtreſs and diſturbance to the whole nervous ſyſtem.

The moſt common ſources of all theſe diſturbances being acrid and offenſive matters, pent up in the alimentary canal, while the general ſyſtem of ſolids and the common maſs of fluids are not in fault; it will be of great utility to obſerve the ſigns that ſhew the preſence and nature of theſe noxious matters, and which point out the moſt proper ways and times for correcting or expelling them.

The ſigns that indicate in general a load of offenſive matter in the ſtomach or flexure of the duodenum, which may and ought to be evacuated by vomiting, are chiefly theſe: foulneſs of the tongue, when it is beſet with ſordes and thick ſloughs, (a circumſtance which conſtantly attends every ſpecies of fever; *) a bitter, ſour, rancid or putrid taſte in the mouth, nauſea, and loſs of appetite; pain in the left orifice and upper part of the ſtomach; weight and oppreſſion about the præcordia,

* There is no ſuch unerring ſign of a fever as a drineſs and foulneſs of the tongue; even the quick pulſe is not ſo infallible, ſince this may be excited by art; and frequently is, in military hoſpitals, and on other occaſions, where people find it neceſſary to appear as having a fever: inſinuating a peeled clove of garlic into the rectum, is a known trick on theſe occaſions, and always found to quicken the pulſe.

præcordia, with fulneſs and a ſoft ſwelling of the hypochondria; heavineſs, giddineſs, and pain in the head; ſhiverings and coldneſs of the extremities, with a general laſſitude and ſudden loſs of ſtrength.

But when the load of offenſive matter is lower down, and requires to be carried off by purging, there is generally then a diſtenſion, pain, and rumbling noiſe of the belly; fetid, ſharp and griping ſtools, pain in the loins, and extended down the thighs, together with weakneſs, and a heavy dull kind of pain about the knees.

The general ſtate of the nervous ſyſtem may be alſo judged of, in ſome meaſure, by the look of the eyes, and from the general appearance of the whole countenance; the more theſe appearances deviate from the peculiar and healthy look, ſo much the more alarming: and hence we always infer great danger, when the patient's countenance is ſo changed, that even his friends can ſcarcely know it. Perſons who are much converſant among the ſick, imperceptibly acquire a knowledge of thoſe ſigns, which are derived from obſerving the eyes, and from the general caſt of features; but there is no ſuch thing as communicating this knowledge in any other way than by pointing out the appearances as they actually preſent themſelves in the countenance of the patient.

CHAP.

CHAP. V.

Signs derived from different Eruptions, and other external Appearances.

IN order to obtain a further knowledge of the ſtate of ſick perſons, we muſt carefully obſerve the different kinds of eruptions, diſcolourings, or other appearances which ſhew themſelves on the ſurface of the body; we muſt examine the blood after it is drawn, inſpect, or perhaps analyſe the urine; conſider ſuch diſcharges as may come from the lungs by ſpitting; from the ſtomach by vomiting; or from the inteſtines by purging.

As ſome of the cutaneous eruptions are preceded or accompanied by a fever, we muſt always diſtinguiſh theſe from ſuch as are not ſo attended.

Many of the febrile eruptions are the offspring of a ſpecific kind of morbific matter; ſuch as the ſmall-pox, for inſtance, and the meaſles: others again are the conſequence of a diſſolved ſtate of the blood, which has been brought on by the mere continuance of violent agitation and increaſed heat, aſſiſted perhaps by ſome putrefactive kind of ferment, (as it may be termed) either received into the body by infection, or generated there by bad diet, or other errors in regard to the non-naturals.

This

This laſt mentioned ſort of eruption, termed commonly Purples or Petechiæ, is of various hues, from a bright red to livid or almoſt black, and of various ſizes, from little ſpecks like ſmall flea-bites to ſpots of a conſiderable breadth, when they are called Vibices.

Theſe petechial eruptions ſcarcely ever riſe above the ſkin, and ſeldom appear until the fever has laſted ſome days, and the ſick perſon is conſiderably exhauſted; neither does their ſtriking out bring any relief.

The other kinds of eruption, for the moſt part, bring relief when they appear; the noxious matter being diſengaged from the maſs of circulating fluids, is depoſited among the inert ſolids in the cellular part of the ſkin: if it be completely thrown off, the fever ſubſides, and all the diſtreſſing ſymptoms diſappear; but if the quantity of acrimonious matter be too much to be thus diſengaged, and ſome of it ſtill remains mixed with the blood, then the fever continues, notwithſtanding the appearance of the eruption. This is the caſe in the more violent degrees of the ſmall-pox, meaſles, miliary and ſcarlet fever. The general concluſions then that we are to form from the appearance of eruptions, in any ſpecies of fever, are theſe; when the febrile ſymptoms greatly ſubſide on the ſtriking out of the eruption, we are to look on the cutaneous efflorescence as a favourable circumſtance, and eſteem it a ſign of the happy termination of the diſeaſe; but on the contrary, when eruptions bring no relief, and the febrile

ſymptoms of oppreſſion, weakneſs, delirium, &c. rather increaſe, we may then infer from ſuch eruptions, that the texture of the blood is already deſtroyed, perhaps beyond the reach of any remedy.

With regard to diſcolouring of the ſkin; a paliſh green caſt, with blackiſh ſpots under the eyes, ſhews that the circulation is languid, and that the blood is poor and watery; if in females of a certain age, it denotes obſtructed menſes; and in the other ſex, it is an indication of a ſcorbutic habit, weak bowels, and bad digeſtion: a livid caſt in the complexion ſhews much the ſame habit of body, is an evidence of tendency to putrefaction in the general maſs of fluids, and that the motions of the living ſolids are too languid: what is called a ſallow complexion or dark muddy caſt in the ſkin of the face, with dulneſs and heavineſs of the eyes, is a ſure ſign that the biliary ſecretion is not properly carried on; but abſolute yellowneſs ſhews the paſſage of either the ductus communis or ductus cyſticus to be ſtopt up, thus hindering the cyſtic bile from flowing into the duodenum, and throwing it back into the maſs of circulating fluids, which carry this humour into the ſubcutaneous veſſels, and lodge it in the cellular part of the ſkin.

The ſweats will often point out the ſtate and condition of the general maſs of fluids, as being ſometimes (though very rarely) found ſour; at other times betraying a putrid ſmell: in ſome caſes the ſweat is found tinged with the red part of

of the blood, which gives it a yellowiſh, or even a reddiſh caſt.

The diſcharge from ulcers may alſo inform us concerning the ſtate of the fluids; if extremely ſharp, fetid, and excoriating, it denotes high degrees of acrimony, either cancerous or approaching nearly thereto; if thin and bloody, it ſhews that putrefactive and diſſolved ſtate, which is of the ſcorbutic nature; if mild, without offenſive ſmell, and of a curdly appearance, it points out the ſcrofulous taint: the diſcharge from venereal ulcers is ſometimes equally ſharp and corroſive, with that which flows from a cancer, and not eaſily diſtinguiſhed from it, but by tracing the progreſs of the diſeaſe, and carefully comparing all the different ſymptoms and appearances.

CHAP. VI.

Signs derived from different Appearances of the Blood.

WITH regard to the information that is to be had by examining the blood, it is not ſo great as might be imagined, ſince blood taken from perſons who are evidently much diſordered ſhall ſometimes appear like what is drawn from thoſe in perfect health; and on the other hand, perſons who labour under no diſeaſe ſhall have blood which appears like that belonging to people in dangerous diſeaſes; as for inſtance, pregnant women have blood with a thick cruſt on it, like what is drawn from one in a pleuriſy.

So that it is no eaſy matter to fix on a preciſe ſtandard whereby to judge either of the healthy quantity or quality of the blood; neither of which can be eſtimated by abſtract conſideration, but are always to be conſidered as relative to the particular circumſtances of age, ſex, and conſtitution.

In general it may be obſerved, that blood of a deep red, which, when cold, ſeparates into ſerum that is limpid and almoſt colourleſs, and a craſſamentum without any thick cruſt of a different colour from the ſubjacent cruor, and which has between a third and one-half ſerum, is good and wholeſome blood, free from morbid acrimony, and which has the due and requiſite proportions of all the different conſtituent parts.

Hence we may judge of the morbid deviations. Blood that is of a very bright red, approaching to ſcarlet, and which does not ſoon part into ſerum and craſſamentum, denotes that the fluids are too abundant in the ſaline part, and ſhews that there is a tendency to gout, or to hot and itchy eruptions: ſuch blood alſo is often ſeen in caſes where there is a hectic fever, or in people who feed too much on ſalted or highly-ſeaſoned kinds of aliment.

In caſes where the ſerum of the blood is in too great proportion, we may apprehend dropſical diſorders, as ſuch a diſſolved ſtate of the blood denotes weakneſs in the vaſcular ſyſtem, whence the ſerum will be apt to fall aſide into the larger cavities, or into the cellular interſtices, and there ſtagnate,

nate, as the lymphatics are now debilitated, and the diſcharges by the ſkin diminiſhed.

If the ſerum be tinged with yellow, it is a ſign that the bile is denied a paſſage into the duodenum, and thrown back into the general maſs of fluids.

If the ſerum of the blood be reddiſh or livid, it ſhews a high degree of diſſolution or putreſcency, ſuch as is peculiar to the ſcurvy, and the worſt kind of putrid fevers; it is ſtill worſe if the ſerum be turbid, or if the whole blood appears foul and dark coloured, and the craſſamentum does not ſeparate.

When the blood parts, as it ought to do, into ſerum and craſſamentum, if the latter be covered with a ſcum or cruſt of a whitiſh or buff colour, it has hitherto been deemed a certain proof that the blood is in a ſtate of too great viſcidity, and conſequently that it cannot flow through the veſſels, but with proportionate degrees of difficulty; and, as the blood which is drawn from patients labouring under inflammatory diſeaſes, for the moſt part exhibits this appearance, it ſerved to confirm the theory which ſuppoſed that inflammations take their riſe from lentor and obſtruction. But modern phyſiologiſts account for the formation of the buff in a much more ſatisfactory way, on principles diametrically oppoſite; and prove, notwithſtanding this apparent viſcidity of the blood, after it is drawn and ſuffered to cool, that, while it flows in the veſſels, it is more fluid than in the ordinary ſtate previous to inflammation.

It

It was formerly mentioned, that the craſſamentum of the blood conſiſts of the colouring particles united with the coagulable lymph; now "when "the arteries are acting ſtrongly, whether the "whole habit be ſtrong or not, the coagulable "lymph is more fluid and longer in coagulating; "of conſequence it lets the red particles, which "are the heavieſt part of the blood, fall down to-"wards the bottom before it coagulates: and up-"on the ſpontaneous ſeparation, the craſſamentum "is divided into two parts; the upper, conſiſting "of the coagulum of the coagulable lymph alone "(which in this caſe is termed the Buff;) the "under, conſiſting partly of this, and partly of the "red globules." *

The appearance of this buff has always engaged the attention of phyſicians; Dr. Langriſh, who was a ſtrenuous aſſertor of the doctrine of lentor, contrived an inſtrument, made on the principles of the common areometer, for enabling him to eſtimate the different degrees of tenacity in the buff, and thereby regulate his practice: other people have taken other methods to examine the blood, ſuch as drying it, to find out the proportion of the ſolid to the liquid part; weighing it ſpecifically, and obſerving

* Fordyce—Elements of the Practice of Phyſic. Part. I. p. 5.—That very ingenious and indefatigable anatomiſt the late Mr. Hewſon, has explained all this matter in the moſt ſatisfactory way, in his Experimental Inquiry into the properties of the Blood; and was the firſt that accounted for the formation of the Buff in the manner above-mentioned.—See his Eſſay, note, page 51, 2d edition.

ing the difference between its weight and that of water; mixing it with different ſaline matters, decoctions of bark, ardent ſpirits, &c. but all theſe are experiments rather of curioſity than of real utility, and have generally been made in conſequence of ſome preconceived theory, which the authors wiſhed to eſtabliſh.

CHAP. VII.

Signs derived from the Urine.

AS the health of the human body depends greatly on the due and regular ſeparation and expulſion of excrementitious matters, ſo the examination and inſpection of theſe, both with regard to their quality and quantity, is of equal ſervice in leading us to form juſt notions of the ſtate of the body, with the obſervation of the pulſe, or inſpection of the blood.

The urine (being an excrementitious humour that is eaſily examined, and which frequently ſhews by its changes the ſtate of the animal motions, as well as the condition of the fluids) has very much engaged the attention of phyſicians from the earlieſt antiquity.

Before we pretend to judge of the appearances in the urine of ſick people, we ought to know what its ſtate is in perſons who enjoy perfect health; and here again there is a conſiderable latitude, as the urine will appear differently according

ing to the time of life, and according to the manner in which people feed or exercise themselves. The urine of an infant is mild and colourless in comparison with that of an aged person, where the saline, oily, and earthy principles abound so much as to give the urine an high colour, strong smell, and considerable sharpness. The same in general may be said of the urine of a sedentary person, who uses little or no bodily exercise, and that of one who labours hard every day. The more the body is exercised the more highly impregnated is the urine with saline, oily, or earthy particles.

The appearances of the urine likewise depend much on the quantities of drink which people accustom themselves to. Such as pour down great quantities of liquids must make a great deal of thin and pale urine, not much saturated with the oily, earthy, or saline particles; the contrary will happen to such as drink but little.

The colour of healthy urine in general may be likened to that of Rhenish or Lisbon wine; limpid throughout and without sediment; for sediment in urine implies, that the different principles of the blood are either unequally proportioned, or not sufficiently mixed and blended together; and consequently shews some defect or deviation from the natural and sound state.

Urine, which is limpid, watery, and in great abundance, shews that the cutaneous discharge is preternaturally diminished, and is always an attendant

tendant on hyſteric or hypochondriac paroxyſms, where there is a ſenſation of extreme cold, oppreſſion, and frequently ſevere pain in ſome particular part, moſt commonly the head or loins. Urine of this ſort is alſo frequently obſerved in febrile diſeaſes, and is to be held as a bad ſign, ſince it ſhews that the ſpaſmodic ſtricture of the ſmalleſt arteries is very great: whence we may infer that the febrile ſymptoms will increaſe, and that we ſhall ſoon find the patient become delirious.

Pale, thin, and limpid urine, in perſons where there is no diſturbance or diſorder of either nervous or vaſcular ſyſtem, ſhews the blood to be poor and watery, it denotes that the body wants ſufficient exerciſe, and that the ſolids in general are in a weak and relaxed ſtate.

Pale and turbid urine ſhews the bad ſtate of the digeſtive organs, that they have not ſufficient power, and that the ſaliva, the bile, and other digeſtive fluids, have greatly loſt their diſſolvent and aſſimilating qualities; whence the chyle that is carried into the blood is crude and indigeſted, retaining too much of the original qualities of the ſubſtances from whence it was formed: perſons in theſe circumſtances have the firſt paſſages clogged with a viſcid phlegm, which favours the generation of worms, and hence it is that pale and turbid urine may be held as a ſign of worms.

Urine that is reddiſh or high-coloured, but without ſediment, is a ſign that the body has been over-heated, either by violent exerciſe or from a febrile

febrile commotion; for the colour of the urine is ſuppoſed to depend chiefly on the quantity of oil it contains, and an increaſed velocity in the circulation never fails to increaſe the abſorption of oily matter from the adipoſe cells; ſo that when oil is mixed with the blood in an undue proportion, the urine will naturally come to partake of it, and put on a higher colour than what it has in people who enjoy perfect health: ſuch urine is therefore, for the moſt part, found in febrile diſeaſes; that is, as long as the obſtacles to free circulation remain; but when things come to a favourable criſis, and the blood is freed from thoſe acrid matters which kept up the irritation, then the urine becomes ſo loaded, that it can no longer retain the oil and ſalts in diſſolution, but is found to depoſite a conſiderable portion of ſediment.

Dr. Langriſh's experiments explain this matter pretty clearly; from theſe it appears, that if the urine of a perſon in perfect health be divided into 512 parts, 494 of theſe will be found on the analyſis to conſiſt of a watery fluid; 12 of them will be a mixture of ſaline and earthy matter; 5 will be purely ſaline, and only one of them will be oily. But the proportions were found to differ very much in urine which was made by a young lad who had laboured under an acute fever, attended with delirium, and other very bad ſymptoms, until the eighth day, when a moderate ſweat broke forth, and the urine let fall a great load of ſediment: here, of the 512 parts, only 484 were watery, whereas the terreo-ſaline was 14, the purely-ſaline

11,

11, while the oily, inſtead of 1, was 3, of the whole 512.

From this difference between the urine of a perſon in health and that which is made at the time when a fever is going off, we plainly ſee the advantages to be expected from urine ſo loaded that it lets fall a plentiful ſediment, ſince it denotes that thoſe ſaline and oily particles, which, whilſt they remained in the blood, increaſed the diſturbance of the motions of the living ſolids, are now thrown off, and the obſtacles in great meaſure removed; whence freedom and equability will be again reſtored to the circulation.

The colour of the ſediment denotes the different condition of the fluids; thus, a yellowiſh ſediment denotes that the flow of bile into the duodenum is by ſome means interrupted.

A blackiſh ſediment ſhews a putreſcent diſpoſition in the general maſs of fluids, and is accounted a very alarming ſign, being only found in thoſe diſeaſes where the texture of the blood is much deſtroyed by a putrefactive acrimony.

Great abundance of pale and viſcid ſediment is a ſign of a relaxed habit, and of crude and indigeſted humours, not only in the firſt paſſages, but alſo in the general maſs of fluids, and may therefore be conſidered as denoting that the diſeaſe, whatever it be, will run out to a conſiderable length. This kind of urine is frequently obſerved in intermittent fevers; but it is a ſtill worſe ſign in theſe

theſe fevers, and ſhews that they will probably become continual, if the urine, during the interval of the fits, though high-coloured, remains limpid, and does not fall any ſediment. The lateritious, or brick-coloured ſediment, found in the urine of hydropic patients, is alſo ſeen in that which is made by perſons in ſome caſes of hectic and intermittent fever, and affords but a bad prognoſis.

In caſes where there has been no fever, if nevertheleſs urine with much ſediment is diſcharged, it is one ſign that the biliary ſyſtem is obſtructed.

Urine with an oily matter floating on it's ſurface denotes that the body to be in a colliquative ſtate; for, the oil of the adipoſe part of the cellular ſyſtem, gives the agreeable plumpneſs, and fulneſs of fleſh, and therefore, ſo when this is either preternaturally abſorbed, or when it is retained in the blood, and not ſtrained off and depoſited in the adipoſe cells, the body muſt neceſſarily fall away.

When much earthy matter ſticks to the ſides of the veſſel containing the urine, or when there is much of this earthy ſediment, it is a ſign of lithiaſis, or diſpoſition in the habit to breed calculi, and more eſpecially if any grit or gravel be found among the ſettlings of the urine.

Little cryſtals of a browniſh ſalt, collecting on the ſurface of the urine, or adhering to the ſides of the glaſs, denote the preſence of a gouty or rheumatic

rheumatic acrimony, and are frequently ſeen in fevers where there is a mixture of rheumatiſm.

Purulent urine ſhews the kidneys, bladder, or proſtate gland, to be ulcerated. A great load of viſcid ſlime denotes that the inſide of the bladder is much irritated by a ſtone, or ſome other offending ſubſtance.

Bloody urine alſo ſhews the preſence of a rugged ſtone, though it may likewiſe ariſe from diſſolution of the blood, from relaxation, or from rupture of the blood-veſſels in the kidneys, in conſequence of blows, falls, or ſtrains. It is eaſy to know whether urine that is extremely red be tinctured with blood or not, either by dipping white linen rags in it, which at once will ſhew the true colour, or by heating it in a glaſs; if it be blood that gives the extraordinary redneſs, it will coagulate, and run into grumes when heated; but if it be owing to ſome other cauſe, the urine, on being heated, will grow rather more limpid, and no grumes will appear.

Theſe are the principal ſigns afforded by the urine, but we are never to rely on theſe any more than on the ſigns by the pulſe, without comparing them with every other circumſtance: thus, for inſtance, if we are called to viſit a patient, who has made a great quantity of pale limpid urine, we are carefully to examine whether there be any degree of diſturbance in the nervous or vaſcular ſyſtems: if we find the nervous ſyſtem affected, but the circulation little or not at all diſturbed, then

then we are to infer that the caſe is hyſterical or hypochondriacal, and not of a very alarming nature; whereas if we ſhould find much diſturbance in regard of the vaſcular ſyſtem, and that there is a fever actually preſent, then this pale and limpid urine muſt warn us to expect worſe ſymptoms, for the reaſons formerly explained.

CHAP. VIII.

Signs derived from the Sweat.

THOUGH the urine, in ſome caſes, pretty clearly ſhews the ſtate of the general maſs of fluids, yet it does not ſo truly point out their condition as the ſweat, which is a more elaborate humour, whereas the urine often conſiſts of little more than the drink that is taken down.

The ancients made great account of examining the ſweat of ſick perſons in regard to its ſmell, and even taſte; though with reſpect to the latter mode of examination, perhaps few moderns will chooſe to copy them.

The matter of ſweat conſiſts of the common perſpirable matter, much increaſed, joined to a portion of the ſubcutaneous oil and lymph, which are either driven out by the force of the circulation, or ſuffered to exſude through the pores of the cuticle, when theſe are too much relaxed.

The principles however of this excrementitious humour are nearly allied to thoſe of the urine, only

only ſweat is more oily, as being ſtrained off from the blood after it has undergone much more of the action of the veſſels, and when its principles are more thoroughly incorporated.

The rules laid down by Hippocrates for judging concerning ſweats in febrile diſeaſes, are reckoned to hold good to this day, and accordingly are handed down and copied from age to age. It has been always obſerved, that ſweats afford a favourable prognoſtic, which break out at the ſame time that the urine depoſites a ſediment, and when the pulſe, from being very frequent and hard, ſhall become rather quiet and ſoft, and which flow not from a particular part of the body, but are univerſal, and relieve the ſick perſon from the oppreſſive load: with ſuch circumſtances ſweats are reckoned ſalutary, and are ſigns that the diſeaſe is going off; more eſpecially if this happens in the 3d, 5th, 7th, 9th, 11th, 14th, 17th, or 21ſt day of the fever, for on theſe days, as hath been already mentioned, it was remarked that beneficial changes uſually happen. On the contrary, ſweats which happen in fevers, on the intermediate days and without ſigns of coction in the urine, are to be conſidered as hurtful; in caſes alſo where the belly continues bound, the pulſe hard, and the patient remains oppreſſed, or in great pain, we are to look on ſweating as a very bad ſign, ſince it ſhews high degrees of internal diſorder, eſpecially near the part from whence the ſweat moſt plentifully flows.

Profuſe

Profuſe ſweating, whether in continual or intermittent fevers, if it continues, ſhews great weakneſs of the ſolids, and denotes a crude and indigeſted ſtate of the fluids, wherein the different principles are not properly blended and combined: it alſo argues weakneſs of the digeſtive organs, or that there is ſome fomes in the body ariſing from the corruption or ulceration of the liver, or of ſome other viſcus. Concerning the inferences to be drawn from the ſmell of the ſweat, they have been already mentioned.

CHAP. IX.

Signs derived from different Appearances of the Stools, and of the Diſcharges by Vomiting and Expectoration.

IT is of uſe alſo to examine the diſcharges by ſtool, as well as thoſe by the ſkin and by the kidneys.

As the colour of the fæces alvinæ depends chiefly on the bile, we may infer from ſtools that are white or greyiſh, that the paſſage from the ductus communis into the duodenum is obſtructed, or that the ſecretion of this neceſſary humour is interrupted; while, on the contrary, ſtools that are very dark ſhew a redundancy of bile.

Green ſtools, which happen ſo frequently to children on the breaſt, and ſometimes to hyſteric or hypochondriacal patients, ſhew that there is an acid

acid ſaburra in the firſt paſſages, which, being mixed with the bile, give this colour to the fæces.

Bloody ſtools, wherein there is much blood, and that without griping, ſhews that the blood comes from ſome veſſels in or about the rectum.

Black ſtools, with a putrid fætor, are the moſt alarming of any, as they are the ſigns of inward corruption and mortification; and if the pulſe ſinks, the ſtrength fails, and cold ſweats come on, we may pronounce death to be juſt at hand.

Slimy ſtools ſhew weakneſs of the digeſtive organs, and imply the preſence of worms.

Watery ſtools denote the preſence of ſome ſharp and irritating matter; or they may proceed from mere weakneſs of the tubuli, which ought to furniſh the liquor inteſtinalis; or they may alſo ariſe, which is the caſe often in aged people, from a hardneſs and infarction of the meſenteric glands, or from a ſtoppage of ſome other evacuation, generally that by the ſkin.

Too great hardneſs of the excrements denotes exceſſive internal heat; or, in other caſes, ſuch ſtools ſhew a defect of the inteſtinal mucus, or of bile, to lubricate and ſtimulate the inſide of the inteſtinal canal.

Great irregularity and diſturbance in regard to the diſcharges of the belly may, and often do, ariſe from cauſes that are merely nervous, and from paſſions of the mind; for, as the inteſtines are plentifully ſtored with nerves, they cannot but be affected when this part of the living ſolids

is diſturbed. And hence it is, that a regular ſtate of the bowels (the patients going to ſtool as is uſual to them in perfect health) may be always held as a good ſign in diſeaſes, ſince it denotes that the nervous ſyſtem is little, or not at all, diſturbed or affected.

The ſame may be ſaid of the ſtomach, and appetite for food; while this holds good, the motions of the living ſolids cannot be much diſturbed; though the groſs fluids may be greatly diſordered, and the blood be nevertheleſs in a very corrupted ſtate: as, for inſtance, in that terrible diſeaſe the putrid ſcurvy, the appetite for food is uſually obſerved to hold out almoſt to the laſt.

When yellow matter is thrown up in great abundance by vomiting, it denotes an exuberance of bile; when green ſtuff comes up, it ſhews the preſence of the moſt ſharp kind of acid ſaburra, and denotes great diſturbance in the nervous ſyſtem; vomiting of blood ſeldom happens but from obſtructed menſes; but vomiting of black and fetid matter, in acute diſeaſes, may be reckoned a ſign of approaching death, as it generally depends on ſome inward mortification; vomiting of pituita, or viſcid and inſipid ſlime, ſhews great weakneſs of the ſtomach, and plainly points out the uſe of ſtrengthening bitters.

With regard to the ſigns by expectoration, and appearance of the different kinds of matter thrown off from the lungs; when abundance of tough phlegm

phlegm or mucus is coughed up, without much difficulty or pain, it denotes that the mucous glands, which are diſperſed through the lungs, are in a ſtate of morbid relaxation; but when only ſmall quantities of white frothy phlegm are brought up, after ſevere coughing, accompanied with an habitual difficulty of breathing, we may infer that the glands above-mentioned are in a hardened or ſcirrhous ſtate: expectoration of purulent matter plainly ſhews the lungs to be ulcerated: pure blood, florid and frothy, when coughed up in large mouthfuls, proves that ſome of the pulmonary blood-veſſels are ruptured; but when blood is only mixed with the purulent or mucous ſpitting, we may preſume that it comes from veſſels which are too much relaxed or weakened.

CHAP. X.

A ſynoptical View of what is contained in Hippocrates, *relating to the Prognoſis in Diſeaſes.*

THERE are two things in which it is univerſally allowed, that Hippocrates excels all who have come after him; candour in relating the ſucceſs of his practice, and perſpicuity in laying down rules for directing the judgment as to the event of diſeaſes: in regard of the former, he has had but too few imitators; but with reſpect to the latter, his precepts are deemed ſo juſt and valuable, that they have been regularly copied by all ſucceeding writers; we ſhall therefore con-

clude our Semeiology with the following extract, from a ſcarce book, the "Meletemata Medicinæ "Hippocraticæ" of Vander Linden, who was at the pains of collecting the different paſſages which relate to this part of the medical ſyſtem, and placing them in oppoſite columns, ſo as to ſhew at one view what the appearances are which may be held as good ſigns, and denote a favourable termination of the diſeaſe, and thoſe which muſt be conſidered as bad, and enable the phyſician to foretell diſtreſs and danger.

SIGNA.

BONA.	MALA.
Ratione quovis in morbo valere.	Ratione non valere. Delirare: inprimis fractis viribus, aut ſenſim ferociter, aut cum tremore, ſpirituve difficili & ſudore aut ſingultu. Præter conſuetudinem reſponſum dare ferox aut audax: loqui multum, aut raro, aut numquam: per vices multum loqui & obſtinate tacere: aliudve non ſolitum facere. Frequenter & fruſtra ſcreare: ſputare: ori manum admovere: muſcas venari: feſtucas colligere: de ſtragulis floccos, aut de pariete paleas carpere. Familiares non agnoſcere. Obliviſci eorum, quæ geruntur.

Somnum

BONA.	MALA.
Somnum bene capere. Interdiu vigilare, noctu dormire, aut saltem mane ad tertiam diei partem. Somnus profundus et compositus. Et qui quovis in morbo profit: delirium sedet: convulsionem solvat. Expergisci suaviter.	Somnum non bene capere. Dormiendi ratio quod at tempus aut modum mutata. Non dormire: non noctu, non interdiu. Somnus qui noxiam adferat: qui modum excedit: qui soporosus, aut turbulentus est. Expergefieri turbulente et cum confidentia. Dormire palpebris non satis commissis, aut oculorum albo minus magis apparente, vel hiante semper ore.
Videre bene.	Non videre. Oculos obserari: perfringi: hebescere: obtundi: caligare: vertigine tenebricosa tentari: lucem splendoremve fugere vel aversari: fixis intueri: frequenter agitare.
Audire bene.	Non audire, aut obtuse, aut inæqualiter: surdum fieri.
Sentire bene.	Non sentire: nedum dolentes dolorem. Torpor in contraria celeriter permutatus. Dolor capitis pertinax: auris intensus: cervicis: faucium sine tumore pusillus et strangulans: in pectore fixus cum torpore: oris ventriculi: præcordiorum

BONA.	MALA.
Sentire bene,	cordiorum cum impotentia loquendi: circa viſcera vehemens: circa umbilicum cum palpitatione: lumborum: ex femore: cubiti: genuum: manuum ac pedum.
Motus membrorum omnium promtos habere, et ſimillimos ſanis. Facile ſe convertere: et in ſublevando ſe, levem eſſe.	Motus impotentiæ. Jactatio crebra. Difficulter converti, et gravem eſſe, cum reliquo corpore, tum manibus ac pedibus. Collum vertere non poſſe. Lingua torpida aut reſoluta. Agitatio ejus difficilis.
Εὐφορία, quæ in quiete corporis et tranquillitate animi conſiſtit, et ex utriuſvis indolentia procedit.	Δυσφορία, ſive animi anxietas et æſtuatio, corporiſque inquietudo et jactatio atque disjectio. Tantum mala non eſt quam rigor ſequitur judicatorius, ſupervenientibus ſudoribus, vel vomitionibus commodis, vel alvo ſubducta.
Convulſio eadem die definens.	Convulſio omnis præter propoſitam. Diſtorqueri velut qui vomitione conflictantur. Palpitationes in totum. Perverſio labii. Linguæ revulſio tremula: commanſio. Calcium jactatio.

Tremores,

BONA.	MALA.
Tremores, qui humoribus coctis et agitari incipientibus ſuperveniunt.	Tremores in principio morborum: aut ex ſiccitate in febribus: itemque parvi.
Sternutatio in morbis, qui ad pulmones non attinent, etiam lethaliſſimis: quin et in doloribus circa caput ac frontem.	Sternutatio in omnibus circa pulmonem morbis.
Singultus, cùm vomitionem criticam antecedit.	Singultus ſemper malus: præſertim ſi ex inanitione fiat.
Horror poſtridie repetens in iis, qui horruerunt et judicatorie exſudarunt.	Horrores crebri ex dorſo: crebri et tenues cum ſudoribus tenuibus: poſt ſudorem: in doloribus.
Rigor quotidianus, febre ardente laboranti ſuperveniens.	Rigores crebri ex dorſo: continentes: multi cum torpore: cum ſopore: cum poſteriorum partium diſtentione: cum æſtu: cum perverſione oculorum: cum exolutione virium: cum ſuppreſſione urinæ: cum judicatione: ægro jam debili: die ſexto.

Vox

BONA.	MALA.
Vox libera et expedita.	Vocis defectio: imprimis cum ſingultu, aut exolutione virium, aut reſpiratione elata et conſpicua, aut ignorantia, aut inſania, aut crebro rigore, aut dolore, aut ex dolore, aut poſt judicationem: quæve ſpeciem præ ſe convulſionis fert. Obſcure loqui.
Reſpiratio facilis: rarior ac lenior.	Reſpiratio difficilis: crebra: magna et rara: magna et frequens: ſublimis: conſpicua: minuta: obſcura: tuſſicula ſuſpicioſa, luctuoſa: ſtertoroſa: coacervata: offendens: velut revocata et ingeminata: duplicata: ſubito revulſa: convulſiva: frigida ex naſo et ore: calida: turbida.
Virium robur atque conſtantia.	Virium imbecillitas: lipothymia: lipopſychia: palpitatio cordis.
Pulſus vehementes, magni, frequentes, rari, undoſi, dicroti, æquales, ordinati, adeoque omnes, qui in ſanis notari ſolent.	Pulſus languidi, parvi, concitati, inæquales, inordinati, intermittentes, intercurrentes, myuri, vermiculantes, formicantes, et quotquot à cujuſque ſani modo longius receſſerunt.

Cibum

BONA.	MALA.
Cibum bene appetere, ſaltem oblatum non recuſare, nedum faſtidire.	Cibum non appetere, etiam oblatum recuſare, aut faſtidire. Pauco expleri. Belle comedenti corpus non proficere.
Sitire, quum oportet: aut non ſitire quum non oportet.	Sitire, quum non oportet: aut non ſitire, quum oportet. Sitis præter rationem ſoluta, aut valde urgens, aut crebro permutata, ſive vicibus multa et nulla.
Dejectio juſſa.	Dejectio invita: fallens ægroti ſenſum, et clam prodiens: labore frequens, conatu irrita.
Urina, quum opus reddita, et bene tum procedens.	Urina non recordanti profluens.
Decubitus talis, qualis eſſe ſanis conſuevit: ſcilicet in latus dextrum aut ſiniſtrum, cervice, manibus, cruribuſque reductis, et corpore toto molliter poſito: pedibus item, et pectore probe tectis.	Decubitus in ventrem: ſupinus, cervice, manibus, pedibuſque extenſis, et inæqualiter diſperſis, aut valde contortis. Ægrum in ipſo morbi vigore velle reſidere: aut ad pedes provolvi, eoſve nudos habere.

Lacrymæ

BONA.	MALA.
Lacrymæ quibus in febribus aliiſve morbis voluntarie profluunt, abſurdum non eſt.	Lacrymæ, quibus quocumque in morbo præter voluntatem effluunt.
Lemas circa oculos non apparere.	Lemæ aut ſordes circa oculos concretæ.
Sordes in auribus amara.	Sordes in auribus dulcis.
Sanguinis è naribus fluxiones largæ, ſeptimo, nono, aut quarto decimo die, è directo, et cum ſignis coctionis.	Sanguinis fluxiones parvæ: plures: multæ et vehementes: bilioſæ: immodicæ: meracæ: repentinæ æſtivo et autumnali tempore: quarto die, aut undecimo: è contrario, et adverſa parte; cum ſignis pravis: ſtillationes: valde rubicundæ.
Salivatio in ſomnis cum ſudore.	Salivare mente motis: inter loquendum.
Sputa, cujuſmodi in ſanis: inſipida videlicet, alba, lævia, æqualia, neque tenuia nimis, neque craſſa, quæque promte et facile exſpuuntur, quæque levitas et faſtidii ceſſatio ſequuntur.	Sputa ſanorum diſſimillima. A faucibus diu cruda: ſubarida: crebra: viſcida, craſſa, exalbida, vi educta. A pectore bilioſa et purulenta: candida, glutinoſa, flava, rufa, ſincera, viridia, nigra: valde ſanguinolenta, æruginoſa, ſpumoſa, viſcoſa: livida, fetida: dulcia: tarde aut difficulter prodeuntia:

BONA.	MALA.
quuntur. A capite craſſa, nec olentia. A pectore ſimilia puri: permiſta bile flava, non multo ſanguine, mucoſa, fuliginoſa, quæ colorantur, et cito maturantur, et facile egeruntur.	tia: dolorem non ſedantia: rotunda.
Vomitus mixtus ex bile et pituita, non multus, non craſſus; aut cujuſcemodi ſponte fieri ſolet.	Vomitus meracus: varius, tum alias, tum ſi ſeſe mutuo conſequuntur: bilioſus: porraceus: æruginoſus: viridis, niger, lividus, ruber, aut omnium colorum: ater: ſanguinolentus: malus, ſupputris et fetidi odoris: exiguus bilioſus: parvus et frequenter repetens: anxioſus.
Dejectio mollis figurata, atque eodem fere tempore, quo ſecunda valetudine aſſuevit, modoque conveniens his, quæ aſſumuntur. Aut liquida non ſtridens, neque crebro, neque	Dejectio cita. Sed ne hæc quidem terrere protinus debet, ſi matutinis temporibus coacta magis eſt, aut ſi procedente tempore paulatim contrahitur, et rufa eſt, neque fœditate odoris ſimilem alvum ſani hominis excedit. Terribilis contra omnis æruginoſa: alba: aquoſa: atra: bile abunde colorata:

BONA.	MALA.
que paulatim ſecedens : ſed bis aut ter interdiu, noctu ſemel ; plus tamen prima luce, pro conſuetudine cujuſque : et craſſior à morbo ad judicationem eunte, et aliquatenus fulva ; ſive ſubrufa, nedum præter naturam olens.	lorata : bilioſa cum efflorescentia ſpumoſa : candicans : circumbilioſa : cruenta : decolor valde : exigua : farinæ ſimilis et ſtercoroſa : fetida : abunde fermentata : friabilis : glutinoſa : graveolens : lævis : larga : limoſa : liquida : livida : maculis nigris diſtincta : meraca : multa cum nigris : nigra : pallida cum virore : perfrigerans : pinguis : pituitoſa : porracea, prærubra : ſanguinis ſplendidi aut grumoſi : ſicca : neque cohærens : ſpumoſa : ſtercoracea : ſtrigmentoſa : ſubcrocea : ſubfriabilis liquida : ſubpallida cum virore : ſubpituitoſa : ſubrubra : tenuis : varia ; ſive ſimul inter ſe mixta, ſive per vices prodeant : cum ſedimento aqueo et pallido vireſcente, aut limoſo et ſublivido, aut purulento, eoque puro aut cruentis ramentiſve mixto.
Urinæ mediocres, et pro ratione craſſeſcentes. Colore citrinæ : ſubrubicundæ. Sedimentum album, læve,	Urinæ aquoſæ : bilioſæ : craſſæ primum deinde tenues : crudæ : cruentæ : albæ pellucidæ tenues : turbatæ cum ſodore : turbidæ : jumentorum inſtar. Colore albæ, præſertim

BONA.	MALA.
læve, æquale, toto tempore judicationis : ſubrubrum et leve in urina ſimili : multum. Ἐπινέφελον rubrum cito apparens. Nubecula alba et deorſum vergens.	tim valdæ æruginoſæ : fulvæ : nigræ : rubicunda valde. Odore fœtidæ. Sedimentum inſtar craſſioris farinæ, ſquamularum, furfurum : genituræ ſimile. Nubecula nigra : ſurſum lata. Contentum pingue et inſtar araneæ : arenoſum : pelliculoſum : purulentum.
Sudores, qui cœperint die tertio, quinto, ſeptimo, nono, undecimo, decimoquarto, decimoſeptimo, viceſimoprimo, viceſimoſeptimo, triceſimoprimo et triceſimoquarto. Ii enim ſudores morbos judicant : præſertim ſi ex toto corpore profluunt calidi et tenues ; fiantque in ſomnis, cum euphoria.	Sudores, qui aliis, quam recenſis diebus, aut intempeſtive fiunt : multi et frigidi : continui et multum debilitantes : multi cum acutis febribus, aut repentina impotentia : acervati in convulſionibus : circa caput, faciem, et collum : circa frontem graveolens : à fronte incipiens : circa pedes et crura.
Pus album, læve, æquale, et quam minime graveolens ; ejuſdem coloris ;	Pus lividium, aut ex pallido vireſcens : ſubcruentum : pituitoſum : ſpumans : qualis amurca : lutulentum, et graveolens :

BONA.	MALA.
coloris; atque expers pituitæ.	veolens: ad fundum ſubſidens.
Lumbricos deſcendere eunte morbo ad criſim.	Lumbricos per os exire.
Flatus ſine ſonitu ac crepitu exiens.	Flatus non erumpere; ſed revolvi: aut cum ſonitu prodire.
Corpus totum æqualiter calidum eſſe ac molle. Icterus die ſeptimo, aut nono, aut undecimo, aut quartodecimo ſuperveniens citra duritiem hypochondrii dextri.	Corpus totum grave: frigidum: mortiferum: febricitantium non omnino leviter conſtare ſibi, nec minui, aut etiam plus æquo colliquefieri: icterus ſuperveniens duro hypochondrio.
Facies bene valentium ſimilis: in magnis morbis conſtans: ex tumida facta depreſſa.	Faciei color alius à naturali: utpote pallidus, niger, lividus, aut plumbeus: bonus cum vultu tetrico: cum mœſtitia: cum inediis: flammeus cum ſudore: bene habita in febribus: aut in parvis morbis prava: triſtis: circumtenſa et contracta: corrupta.
Frons ſanorum ſimillima.	Frons dura, intenta, arida: contracta: frigida: venæ circa eam tumidæ.

Oculi

BONA.	MALA.
Oculi albi, clari, lucidi, et omnino ſanorum ſimillimi. Album ex nigro aut livido clarum fieri.	Oculi rubicundi, ſqualentes, obſcuri, tumidi, aut venulæ in albo liveſcentes, aut nigricantes, alter altero minor: concavi: colorati natantes velut dormitantium: pulvere obſiti: expreſſi foras: intente ſplendentes: ferocientes: ſicci: areſcentes ſicut ſpuma: ſubapparationes in ſomnis.
Palpebræ naturaliter conſtitutæ.	Palpebræ liveſcentes perverſæ: circumtenſæ: non commiſſæ: aut commiſſis aliquid ex albo ſubapparere: cilia retorta.
Aures naturaliter habentes.	Aures frigidæ, pellucidæ, contractæ: extremitates earum inverſæ. Aurium rubores, ſonitus, aut tinnitus.
Tempora ſanis ſimilia.	Tempora collapſa.
Naſus ſano ſimilis.	Naſus lividus: pallidus: acutus, perverſus.
Malæ, quales eſſe ſano ſolebant.	Malarum rubor. In malas et labia dormientium inſtar inflare.
Labia ſeſe ut in ſano habentia.	Labia perverſa, reſoluta et pendula, frigida, exalbida: liveſcentia.

Dentes

BONA.	MALA.
Dentes puros manere.	Dentibus lentores obnaſcentes : ſtridere : ſiderari.
Lingua recte ſe habens : non decolor : aut bilioſa : aut ejus diſulcum velut ſaliva alba obductum.	Lingua aduſta : æſtuoſa : ardens : arida : aſpera et valde denſa : bulla ſublivida in ea apparens : combuſta : denſa et valde arida : fuliginoſa arida : horrida ſtatim, poſtea exaſperata, fiſſaque : livida : mollis præter rationem : nigricans : obſcura peripneumonica : pallida albicans : rubicunda reſiccata : ſicca : cum effloreſcentia aſpera pallida et albicante.
Fauces humidæ et naturali modo conſtitutæ.	Fauces exulceratæ.
Collum rubere, præſertim in anginoſis.	Collum durum : perfrigeſcens.
Hypochondria mollia, æqualia, et doloris expertia.	Hypochondria intenta, et inæqualiter affecta dextra ad ſiniſtra, aut inflammata, aut pulſatio in iis, aut tumor durus et dolens : ſublimia.
Venter mollis et bene tumidus : et partes, quæ, ad umbilicum et imum ventrem ſunt, craſſitudinem habere.	Venter in tumorem ſublatus : valde calidus : aut ardens velut in volvulis : æſtus circa ventriculum vehemens.

Genitale

BONA.	MALA.
Genitale et teſtes naturaliter penduli.	Genitale et teſtes ſurſum contracti.
Extrema calida et naturaliter habentia.	Extrema frigida : livida : ſublivida : non recaleſcentia : in utrumque celeriter mutata. Externa algere, interna uri.
Manus modice calidæ, et qualis ſanis eſſe conſueverunt.	Manus frigidæ, velut congelatæ : macula livida circa illam. Carpus extimus frigens, brachio et manu tepentibus.
Pedes moderate calidi, et quales eſſe ſanis ſolebant.	Pedes non admodum calidi : calidi in horroribus : frigidi : frigidi inſtar lapidis : lividi : omnino nigri : tepidi.
Ungues naturalibus ſimillimi.	Ungues lividi : curvi.
Cutis mollis et bene habita.	Cutis arida.

Propoſitis, quæ ægrotantibus, aut ſpem promittunt, aut metum portendunt : ſupereſt, ut et ea, quæ mortem denunciant, proponamus. Ea vero quaſi duûm generum ſunt : quædam namque futuram, quædam præſentem mortem teſtantur. Futura denunciatur, ubi æger ſupinus cubat, eique genua contracta ſunt : ubi deorſum ad pedes ſubinde delabitur : ubi brachia et crura nudat, et inæqualiter diſpergit, neque iis calor ſubeſt : ubi

hiat : ubi aſſidue dormit : ubi is, qui mentis ſuæ non eſt, neque id facere ſanus ſolet, dentibus ſtridet : ubi ulcus, quod aut ante, aut in ipſo morbo natum eſt, aridum, et aut pallidum, aut lividum factum eſt. Illa quoque mortis indicia ſunt : carpi frigidi : ungues digitique pallidi : frigidus ſpiritus : aut ſi manibus quis in febre, et acuto morbo, vel inſania, pulmoniſve dolore, vel capitis, in veſte floccos legit, fimbriaſve deducit, vel in adjuncto pariete, ſi qua minuta eminent, carpit. Dolores etiam circa coxas et inferiores partes orti, ſi ad viſcera tranſierunt, ſubitoque deſierunt, mortem ſubeſſe teſtantur ; magiſque, ſi alia quoque ſigna acceſſerunt. Neque is ſervari poteſt, qui ſine ullo tumore febricitans, ſubito ſtrangulatur, aut devorare ſalivam ſuam non poteſt : cuive in eodem febris corporiſve habitu cervix invertitur, ſic ut devorare æque nihil poſſit : aut cui ſimul et continua febris et ultima corporis infirmitas eſt : aut cui, febre non quieſcente, exterior pars friget, interior ſic calet, ut etiam ſitim faciat : aut qui, febre æque non quieſcente, ſimul et delirio et ſpirandi difficultate vexatur : aut qui, epoto veratro, exceptus diſtentione nervorum eſt : aut qui ebrius obmutuit. Is enim fere nervorum diſtentione conſumitur, niſi aut febris acceſſit, aut eo tempore, quo ebrietas ſolvi debet, loqui cœpit. Mulier quoque gravida acuto morbo facile conſumitur : et is, cui ſomnus dolorem auget : et cui protinus, in recenti morbo, bilis atra vel infra vel ſupra ſe oſtendit : cuive alterutro modo ſe promſit, cum jam longo morbo corpus ejus eſſet extenuatum et confectum. Sputum

tum etiam biliosum, et purulentum, sive separatim ista, sive mixta proveniunt, interitus periculum ostendunt. Ac, si circa septimum diem tale esse cœpit, proximum est, ut is circa quartumdecimum diem decedat, nisi alia signa mitiora pejorave accesserint, quæ quo leviora graviorave subsecuta sunt, eo vel seriorem mortem, vel maturiorem denunciant. Sudor quoque frigidus in acuta febre pestiferus est: atque in omni morbo vomitus, qui varius et multorum colorum est; præcipueque, si malus in hoc odor est. Ac sanguinem quoque in febre vomuisse, pestiferum est. Urina vero fulva et tenuis esse in magna cruditate consuevit, et sæpe, antequam spatio matureścat, hominem rapit. Itaque si talis diutius permanet, periculum mortis ostendit. Pessima tamen est, præcipueque mortifera, nigra, crassa, mali odoris. Atque in viris quidem, et mulieribus talis deterrima est. In pueris vero, quæ tenuis et diluta est. Alvus quoque varia, pestifera est; et quæ strigmentum, sanguinem, bilem, viride aliquid, modo diversis temporibus, modo simul, et in mistura quadam, discreta tamen repræsentat. Sed hæc quidem potest paulo diutius trahere. In præcipiti vero jam esse denunciat, quæ liquida, eademque vel nigra, vel pallida, vel pinguis est; utique, si magna fœditas odoris accessit.

Præsentem mortem, sive ad ultima ventum esse testantur, nares acutæ, collapsa tempora, oculi concavi, frigidæ languidæque aures et imis partibus leniter versæ, cutis circa frontem dura et intenta, color aut niger aut perpallidus, multoque magis, si ita hæc sunt, ut neque vigilia præ-

ceſſerit, neque ventris reſolutio, neque inedia. Ex quibus cauſſis interdum hæc ſpecies oritur, ſed uno die finitur. Itaque diutius durans mortis index eſt. Si vero in morbo vetere jam triduo talis eſt, in propinquo mors eſt: magiſque, ſi præter hæc oculi quoque lumen refugiunt, et illacrymant; quæque in iis alba eſſe debent, rubeſcunt; atque in iiſdem venulæ pallent; pituitaque in iis innatans, noviſſime angulis inhæreſcit; alterque ex his minor eſt; iique aut vehementer ſubſederunt, aut facti tumidiores ſunt: perque ſomnum palpebræ non committuntur, ſed inter has ex albo oculorum aliquid apparet; neque id fluens alvus expreſſit: eædemque palpebræ pallent, et idem pallor labra et nares decolorat: eademque labra, et nares, oculique, et palpebræ, et ſupercilia, aliquave ex his perverſuntur: iſque propter imbecillitatem jam non audit, aut non videt; et pulſus formicatur ac deficit; et reſpiratio in pulmone primum, mox gutture ſtridet.*

* Theſe ſigns of approaching death are moſtly tranſcribed from Celſus.

A ME-

A

METHODICAL INTRODUCTION

TO THE

THEORY

OF THE

ART OF MEDICINE.

BOOK V.

HYGIEINE; OR, GENERAL RULES FOR PRESERVING HEALTH.

CHAP. I.

Rules for the Management of Valetudinarians.

THAT part of the medical ſyſtem which lays down rules for the preſervation of health, and prevention of diſeaſes, (termed Hygieine) is not to be ſtrictly underſtood as if it reſpected only thoſe people who enjoy perfect health, and who are under no apprehenſions of diſeaſe, for ſuch ſeldom either deſire or attend to medical advice; but ſhould rather be conſidered as relating to valetudinarians, or to ſuch as, though not actually ſick, may yet have ſufficient reaſons to fear that they will ſoon become ſo; hence it is that the rules muſt be applied to correct morbific diſpoſitions, and to obviate

viate the various things that were ſhewn to be the remote, or poſſible cauſes of diſeaſes.

From the way in which the ſeveral temperaments are uſually mentioned by ſyſtematic writers, it ſhould ſeem as if they meant that every particular conſtitution muſt be referred to one or other of the four; but this is far from being reducible to practice, ſince by much the greater number of people have conſtitutions ſo indiſtinctly marked, that it is hard to ſay to which of the temperaments they belong.

When we actually meet with particular perſons who have evidently either

(1.) Too much ſtrength and rigidity of fibre, and too much ſenſibility;

(2.) Too little ſtrength, and yet too much ſenſibility;

(3.) Too much ſtrength, and but little ſenſibility; or,

(4.) But little ſenſibility, joined to weakneſs;

we ſhould look on ſuch perſons as more or leſs in the valetudinary ſtate, who require that theſe morbific diſpoſitions be particularly watched, leſt they fall into thoſe diſeaſes which are allied to the different temperaments.

People of the firſt-mentioned temperament being liable to ſuffer from continued fevers, eſpecially of the inflammatory ſpecies, their ſcheme of preſerving health ſhould conſiſt in temperate living, with reſpect both to diet and exerciſe; they

they ſhould ſtudiouſly avoid immoderate drinking, and be remarkably cautious leſt any of the natural diſcharges be checked. People of this habit bear evacuations well, eſpecially bleeding; they ought not however to loſe blood but when they really require to have the quantity leſſened, becauſe too much of this evacuation would be apt to reduce the conſtitution to the ſecond-mentioned temperament, wherein ſtrength is deficient, but ſenſibility redundant.

Perſons of the ſecond temperament are remarkably prone to ſuffer from painful and ſpaſmodic diſeaſes, are eaſily ruffled, and thoſe of the ſofter ſex, who have this delicacy of habit, are very much diſpoſed to hyſterical complaints. The ſcheme here ſhould be, to ſtrengthen the ſolids by moderate exerciſe, cold bathing, the cortex, and chalybeate waters; particular attention ſhould conſtantly be had to the ſtate of the digeſtive organs, to prevent them from being overloaded with any ſpecies of ſaburra which might engender flatus, or irritate the ſenſible membranes of the ſtomach and inteſtines, from whence the diſorder would ſoon be communicated to the whole nervous ſyſtem: perſons of this conſtitution ſhould never take any of the draſtic purges, nor ſtronger emetics; neither ſhould they loſe blood but in caſes of urgent neceſſity; but a principal ſhare of management, in theſe extremely irritable conſtitutions, conſiſts in avoiding all ſudden changes of every ſort, eſpecially thoſe with reſpect to diet and cloathing, and in keeping the mind as much as poſſible in a ſtate of tranquillity: hence the great advantages which people of this frame derive

rive from the uſe of medicinal waters drunk on the ſpot, becauſe of that freedom from care and ſerious buſineſs of every kind, which generally obtains in all the places laid out for the reception of valetudinarians.

The third-mentioned temperament, where there is an exceſs of ſtrength and but little ſenſibility, does not ſeem remarkably prone to any diſtreſſing or dangerous ſpecies of diſeaſe; and therefore it can hardly be ſuppoſed that perſons ſo circumſtanced will either of themſelves think of any particular ſcheme of management, or have recourſe to the faculty for their inſtructions; ſuch conſtitutions, however, we may obſerve, bear all kinds of evacuations well, and ſometimes require them to prevent an overfulneſs, which might end in an oppreſſion of the brain, or ſome other organ of importance.

But the fourth temperament, where we have weakneſs joined to want of ſenſibility, is exceedingly apt to fall into tedious and dangerous diſeaſes, ariſing from a defect of abſorbent power in the proper ſets of veſſels, and from remiſſneſs of the circulation in general: whence corpulency, dropſy, jaundice, and different degrees of ſcorbutic affection. In order to prevent theſe, or any other ſpecies of accumulation and depravation of the animal fluids, the people of this conſtitution ſhould uſe a generous courſe of diet, with briſk exerciſe, and be careful that none of the ſecretions be interrupted, nor any of the natural diſcharges ſuppreſſed; theſe conſtitutions bear purging well, and often require it; as alſo the uſe of emetics, which are frequently found neceſſary to ſupply the

place

place of exercise, by agitating the abdominal viscera, and are of service to prevent the stagnation of bile, or the accumulation of mucous humours, which hinder digestion, and clog the first passages. The free use of mustard, horse-raddish, and the like sort of stimulating dietetics, is serviceable in these torpid habits.

So far with respect to the morbific dispositions of the living solids; let us next mention briefly the methods to be pursued for preventing diseases from the part of the gross fluids.

When the general mass of fluids is accumulated beyond what is conducive to the perfection of health, there arises what the writers term a Plethora, which may prove the source of different diseases; and therefore, when this overfulness begins to produce languor and oppression, care should be taken in time to reduce the body to a proper standard, by abridging the food and increasing the natural discharges, using more exercise, and indulging less in sleep.

But in opposite circumstances, where the fluids have been exhausted, we are to endeavour the prevention of further waste by the use of strengthening stomachics, nourishing diet, and indulgence from fatigue of body or mind.

Vitiated fluids are to be considered as affected either with the different kinds of general acrimony, acid, putrefactive, muriatic, &c. or as betraying signs of some of the species of morbific matter, which give rise to particular diseases, such as gout, rheumatism, stone, scurvy, &c.

During

During the ſtate of infancy, we may ſometimes obſerve a remarkable acidity, which not only ſhews itſelf in the firſt paſſages, but alſo ſeems to contaminate the general maſs of fluids. As it takes its riſe, however, from weak bowels, our views, when we mean to prevent the ill conſequences, muſt be chiefly directed to ſtrengthen the digeſtive organs, as on their ſoundneſs the preparation of good chyle depends; and hence ſmall doſes of rhubarb and chalybeates (either the natural chalybeate waters mixt with milk, or the flores martiales in doſes of a few grains, according to the age of the child) are to be adminiſtered; and the diet is to be ſo regulated as not to add to this acid tendency; briſk exerciſe is likewiſe to be enjoined, with frictions on the ſtomach, belly, and lower extremities.

Where the fluids tend to the putrefactive ſtate, which ſhews itſelf by rottenneſs of the teeth, ſpongineſs and bleeding of the gums, a bloated look and livid caſt; the diet then ſhould be chiefly of freſh vegetables, and ripe fruits, with wine in moderation, briſk exerciſe, and ſtrengthening bitters.

Where a ſharp muriatic acrimony ſhews itſelf by itching eruptions, uncommon thirſt, and fluſhing heats, nothing will anſwer better than ſuch ſulphureous waters as the Harrowgate and Moffat in Britain, or the Lucan and Swadlinbar in Ireland; at the ſame time uſing a courſe of diet that ſhall neither be acrid nor heating.

So far with reſpect to thoſe kinds of morbific matter which do not invariably produce a particular ſpecies of diſeaſe; but there are others of a ſpecific nature, ſome of which are generated in the

the body ſpontaneouſly, and ſeem to ariſe from errors in diet, or other circumſtances of ill management with reſpect to the animal œconomy; and hence it is ſometimes poſſible, in ſome degree, if not altogether, to prevent the ill conſequences. Thus, there are inſtances where returns of the gout have been prevented by adhering ſtrictly to a milk diet.

The rheumatiſm has alſo been ſometimes warded off by wearing a flannel ſhirt, or by uſing the cold bath without interruption.

The ſtone may be retarded in its progreſs, and prevented from creating much diſtreſs, by the internal uſe of ſoap and lime-water, or by ſoap-lees, taken in milk or veal-broth.

The putrid ſcurvy may be prevented by warm cloathing, and perſeverance in briſk exerciſe, by drinking wine or cyder, and eating freely of ſuch ſound vegetable ſubſtances as can be had in thoſe ſituations where this diſeaſe is moſt apt to ſhew itſelf.

In conſtitutions where there is an hereditary diſpoſition to the ſcrofula, if early precautions be taken to ſtrengthen the ſolids by cold bathing, a nouriſhing courſe of diet, and moderate uſe of wine, the acrimony which gives riſe to the diſeaſe will probably be prevented from producing any very bad effects.

The other kinds of morbific matter, which are of the ſpecific nature, are received into the body by infection or contagion.

The infection of a putrid fever or dyſentery is beſt prevented by immediately taking an emetic

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on the firſt attack of the ſickneſs or ſhivering; and if that does not completely anſwer, let a large bliſter be applied between the ſhoulders; by this method the nurſes and other attendants on the ſick in the naval hoſpitals, have often been preſerved.

As to other infectious morbific matters; it has been alleged that the ill effects of the bite of a mad animal may be prevented by uſing the cold bath, and taking a powder which was inſerted in former editions of the London Diſpenſatory, under the name of Pulvis Antilyſſus: this powder however has long loſt its credit, and at preſent another, which is ſold under the name of the Ormſkirk Medicine, has taken its place. This alſo will have its day, and then fall into oblivion.

But there are well atteſted inſtances where mercury has been found to prevent the hydrophobia; and the chief dependence ſhould be placed either on mercurial frictions, or ſome of the more active preparations of that powerful mineral: theſe ſhould be uſed, as ſoon as poſſible after the bite, ſo as to raiſe a ſlight ſalivation, and the ſpitting ſhould be kept up for ſome weeks, at the ſame time the actual cautery, or at leaſt a cauſtic ſhould be applied to the part which was wounded, and care taken to keep the ſore running for a reaſonable time: but the moſt certain and efficacious way of preventing the ill conſequences, is inſtantly, (if it may be done) to cut out the piece, in the place that happens to be bitten.

It has alſo been affirmed, that the bite of a viper may be rendered harmleſs, by rubbing the part

part with the viper's fat, or with common olive oil. Some of the French academicians, who made trials with oil, as an antidote to the bite of a viper, ſay, that it is not to be depended on; but the experiments ſucceeded better in England, as we may ſee in the Philoſophical Tranſactions.

The ill effects that may ariſe from the different ſpecies of ſaburra are to be obviated, in general, by the prudent adminiſtration of emetics, and carefully abſtaining from ſuch kinds of food as have been already mentioned, when we ſhewed the cauſes of the accumulation of noxious matters in the firſt paſſages.

Crude vegetables, milk, butter and other oily ſubſtances, are to be avoided by perſons troubled with a ſourneſs in the ſtomach; briſk exerciſe, eſpecially riding, is to be uſed, and they are to refrain from fermented liquors; the common drink ſhould be pure water, or water with a very little of ſome ardent ſpirit, ſuch as rum or brandy. Selters and Vahls water, are to be drunk medicinally, aromatic bitters, infuſions, or tinctures, with the acid elixir of vitriol, from ten to twenty drops, will be found ſerviceable, in order to ſtrengthen the fibres of the ſtomach, and promote the expulſion of its contents, thereby preventing the too haſty fermentation of the alimentary mixture. In order to procure immediate relief, the magneſia alba, or creta præparata, will ſeldom fail; and the magneſia as well as the other may be made into lozenges, with a little ſugar and mucilage, and in that form may be carried about, and taken occaſionally

occaſionally by people afflicted with the acid ſaburra.

In conſtitutions where there is an exuberance or ſtagnation of bile, and a troubleſome bitterneſs in the mouth, it is neceſſary to keep the bowels always free, by taking occaſionally ſmall doſes of pure aloes, oleum ricini, cream of tartar, ſome of the common purging ſalts, or the natural purging waters.

When there is a tendency to the empyreumatic and rancid ſaburra, people ſhould carefully avoid all the various kinds of thoſe oily and high-ſeaſoned things generally termed Made-diſhes, and eat ſparingly of plain meat, without rich ſauces or much gravy; and in theſe caſes the propereſt drink is pure water.

CHAP. II.

Rules for thoſe who enjoy perfect Health.

THERE can be no doubt that, in general, temperance is the true foundation of health, and yet the ancient phyſicians, as we may ſee in the rules laid down by Celſus, did not ſcruple to recommend indulgence now and then, and allowed people to exceed both in eating and drinking; but it is ſafer to proceed to exceſs in drink than in meat; and if the debauch ſhould create any extraordinary or diſtreſſing degree of pain or ſickneſs, and a temporary fever ſhould enſue, there are

are two ways of ſhaking it off, either to lie in bed and encourage perſpiration, or to get on horſe-back, and by briſk exerciſe reſtore the body to its natural ſtate. The choice of theſe two methods muſt always be determined by the peculiar circumſtances of the parties concerned; and from the experience which they may have had, which agrees beſt with them.

If a perſon ſhould commit exceſs in eating, eſpecially of high-ſeaſoned things, with rich ſauces, a draught of cold water, acidulated with ſpirit of vitriol, will take off the ſenſe of weight at the ſtomach, and aſſiſt digeſtion, by moderating and keeping within bounds the alimentary fermentation, and thus preventing the generation of too much flatus. The luxury of ices may be here of real ſervice at the tables of the great, as producing ſimilar effects with the cold water acidulated. Perſons in theſe circumſtances ought not to lay themſelves down to ſleep, but ſhould keep up and exerciſe until they are ſenſible that the ſtomach is unloaded, and that they no longer feel any oppreſſive weight about the præcordia.

If a man is obliged to faſt, he ought, if poſſible, during the time, to avoid laborious work: after ſuffering ſevere hunger, people ought not at once to gorge and fill themſelves; nor is it proper, after being overfilled, to enjoin an abſolute faſt; neither is it ſafe to reſt totally immediately after exceſſive labour; nor ſuddenly fall to hard work after having been long without motion: in a word, all changes ſhould be made by gentle degrees;

grees; for though the conſtitution of the human body be ſuch that it can bear many alterations and irregularities without much danger, yet, when the tranſitions are extremely ſudden, they cannot fail of producing ſome kind or degree of diſorder.

It is alſo the advice of Celſus to vary the ſcenes of life, and not confine ourſelves to any ſettled rules; but as inaction renders the body weak and liſtleſs, and exerciſe gives vigour and ſtrength, people ſhould never long omit riding, walking, or going abroad in a carriage; fencing, playing at tennis, or dancing, as each ſhall be found moſt agreeable or convenient, are to be uſed in their turns, according to the circumſtances and tendency to any particular ſpecies of diſeaſe. But when the weakneſs of old age ſhall have rendered the body incapable of all theſe, then dry frictions with the fleſh bruſh will be extremely requiſite to preſerve health, by accelerating the flow of humours through the ſmalleſt orders of veſſels, and preventing the fluids from ſtagnating too long in the cellular interſtices of the fleſhy parts.

Sleep is the great reſtorer of ſtrength; for, during this time, the nutritious particles appear to be chiefly applied to repair the waſte, and replace thoſe that have been abraded and waſhed off by the labour and exerciſe of the day; but too much indulgence in ſleep has many inconveniencies, both with regard to body and mind, as it blunts the ſenſes and encourages the fluids to ſtagnate in the cellular ſyſtem; whence corpulency, and its neceſſary conſequences, languor and weakneſs.

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The proper time for ſleep is the night-ſeaſon, when darkneſs and ſilence naturally bring it on; therefore day-ſleep in general is not refreſhing, and to ſome people really diſtreſsful, as creating an unuſual giddineſs and languor, eſpecially in perſons addicted to literary purſuits; cuſtom, however, frequently renders ſleeping in the day neceſſary, and in thoſe conſtitutions where it is found to give real refreſhment it ought to be indulged.

With regard to the general regimen of diet, it has always been held as a rule, that the ſofter and milder kinds of aliment are moſt proper for children and younger ſubjects; that grown perſons ſhould eat what is more ſubſtantial; and old people leſſen their quantity of ſolid food, and increaſe that of their drink.

Such readers as wiſh to be completely informed concerning the rules for preſerving health, will find them particularly laid down in Mackenzie's Hiſtory of Health, who has given a ſummary view of all that has been written on this particular part of phyſic; and as he publiſhed his book when near eighty years of age, it is to be preſumed that he was a competent judge of what was proper to be enjoined.

A

METHODICAL INTRODUCTION

TO THE

THEORY

OF THE

ART OF MEDICINE.

BOOK VI.

THERAPEIA; OR, GENERAL SCHEME OF CURING DISEASES.

CHAP. I.

General Methods of Cure, with reſpect to diſordered Motions in the Vaſcular Syſtem.—Intenſeneſs.

AS the morbific diſpoſitions and remote cauſes are what we ought to have in view when we endeavour to prevent diſeaſes, ſo the actual or immediate cauſes are the things which we muſt conſider when we mean to alleviate or cure them. The Therapeia therefore is to be chiefly directed, ſo as to obviate and remove the actual cauſes, whether the diſeaſe be univerſal, conſiſting of general ſymptoms; or local, depending on the diſorder of ſome particular part.

It has been often mentioned, that the immediate cauſes of the fifteen general ſymptoms which predominate in univerſal diſeaſes are reducible to intenſeneſs and irregularity, remiſſneſs and ſuſpenſion of the motions carried on in the vaſcular and nervous ſyſtems; hence we may eaſily ſee what the general indications of cure muſt be.

We ſhall begin with the vaſcular ſyſtem, and ſhew the means proper to be uſed when the motions here are not carried on with that moderation and equability which the healthy ſtate requires.

The diſeaſes which are the conſequences of this intenſeneſs and irregularity, are fevers, inflammations, and active fluxes, wherein the pulſe is ſtrong and rapid; with the predominant ſymptoms of exceſſive heat, thirſt, oppreſſion, and reſtleſſneſs: to alleviate theſe, we muſt have recourſe to bleeding, to purging, to thoſe medicines which are termed Sedatives, frequently to emetics, and to ſuch a low courſe of diet as ſhall co-operate with the other remedies. *

BLEEDING.—Though we do not know preciſely wherein the ſtrength of the living fibres conſiſts, yet we know that, unleſs the blood-veſſels be completely full, ſo that an equilibrium be kept

* As the reader is ſuppoſed to be already acquainted with Diſpenſatories, and books on the Materia Medica, only thoſe compoſitions and ſimples are mentioned, which are abſolutely neceſſary, even in the moſt confined circle of practice: but the apothecary muſt be furniſhed with a multitude of other articles, and the phyſician will have occaſion to preſcribe them, if reſident in a large town, and employed among people in affluent circumſtances.

kept up between the contractile power of the ſolids and the expanſive force of the fluids, the ſtrength of the muſcular fibres in general diminiſhes; and this in proportion to the quantity of blood drawn from the veſſels, and to the ſuddenneſs of the evacuation.

When the muſcular force in general is weakened, the heart, as a particular muſcle, will want ſomewhat of its power to propel the blood; hence the circulation will become more languid, and conſequently there will be an abatement of animal heat: thus we may eaſily comprehend how it happens that bleeding ſhould cool the body.

But then we are to conſider, that ſome degree of obſtruction or ſpaſmodic conſtriction generally prevails in caſes where intenſeneſs of motion in the vaſcular ſyſtem continues for any conſiderable length of time; this keeps the heart and arterial ſyſtem in a ſtate of unuſual irritation; and hence the heat will continue to be diſtreſſing, notwithſtanding the bleeding, unleſs at the ſame time that the blood is drawn off, the obſtacles ſhould alſo give way, and allow the circulation throughout the minute arteries to proceed with its natural freedom.

We are alſo to conſider, that there are caſes wherein the exceſs of heat is more owing to an increaſe of the blood's inteſtine motion, than to that of its progreſſive, and conſequently in theſe caſes we are not to expect that bleeding ſhall cool the body: this kind of heat, as was explained formerly, is that which is peculiar to the worſt ſort of

of putrid fevers, wherein the pulſe is weaker than during health, and where bleeding is always found to do harm.

Hence we may underſtand why bleeding ſo ſeldom interrupts the progreſs of a fever; it is, nevertheleſs, extremely ſerviceable, and ſcarcely ever to be diſpenſed with at the commencement of thoſe diſeaſes which conſiſt chiefly of intenſeneſs in the motions of the vaſcular ſyſtem, which we can always know from the pulſe. For as often as we meet with a frequent, ſtrong and full pulſe, accompanied with great heat, pain and oppreſſion, we may ſafely bleed, be the diſeaſe what it will. The experienced Huxham ſays, that in ſuch circumſtances he would always take away blood, though he were even certain the fever ſhould turn out peſtilential.

But there are caſes wherein bleeding is abſolutely neceſſary, even though the pulſe be weak and ſmall; as for inſtance, in the peripneumony, and in ſome other caſes of internal inflammation, the particular ſigns of which will be laid down in their proper places.

With regard to the repetition of bleeding, we may obſerve the following rules:

When we find that after bleeding the pulſe ſtill continues frequent, but diminiſhes in its ſtrength, and that the exceſſive heat and oppreſſion about the præcordia are little or nothing abated; we muſt then be very cautious how we repeat the bleeding, as we might thereby weaken the body too much, and diminiſh the chance of ſeeing the

the obſtruction or ſpaſmodic conſtriction give way; for until theſe obſtacles be thoroughly removed, the circulation can never become moderate, equable, and free.

The more the pulſe ſinks after bleeding, and the more the ſickneſs and anxiety increaſe, ſo much the more cautious muſt we be not to take away more blood; but, on the other hand, in all caſes where we find that the bleeding has rather raiſed the pulſe, and relieves from the difficulty of breathing or weight about the præcordia, then we may ſafely repeat it, as far as we ſhall find the other circumſtances of the diſeaſe require.

In regard to the quantity of blood to be taken away, and the particular veſſels proper to be opened, as well as the manner of doing it, no general rules can be laid down, ſince all this muſt depend on particular circumſtances, which may demand that we ſhould open a particular vein, or perhaps uſe arteriotomy in preference to veneſection, or have recourſe to ſcarification, and the application of leeches.

In caſes where ſome urgent diſtreſs, ſuch as great oppreſſion and difficulty of breathing, require the repetition of bleeding, while other circumſtances, ſuch as extreme ſickneſs and weakneſs, rather forbid that we ſhould take away blood, the ſafeſt way is to ſtand by while the operation is performed, and continue to feel the pulſe during the time that the blood flows; if the pulſe ſhall be found to grow more free, and to gain ſtrength in the ſtroke, we may go on to take away

as

as many ounces as we pleaſe; but if it ſhould ſink, then we are inſtantly to order the orifice to be cloſed.

Perſons who are remarkably apt to faint on being blooded, if they continue to ſit erect, are found to eſcape this diſtreſſing circumſtance by lying in a horizontal poſture, while the blood flows, and for ſome little time afterwards. Theſe people are of that temperament wherein there are high degrees of ſenſibility, with too little ſtrength and elaſticity of fibre; ſo that the emptied blood-veſſels do not contract ſo quickly as they ſhould do, and every change of equilibrium between the parts containing and the parts contained, is very quickly and ſenſibly felt.

It was formerly ſhewn, that while the ſtrength of the heart and arterial ſyſtem is unimpaired, the attraction of gravitation has no perceptible power over the motions of the animal fluids; but when that decays, then the fluids are ſubjected, like every other ſpecies of groſs matter, to the laws of gravity; hence, in the conſtitutions here deſcribed, when the ſtrength of the motory fibres in general is abated by bleeding, the heart ſo far loſes its power, that it has not force ſufficient to propel the blood through the ſuperior ramifications of the aörta, unleſs it be favoured by taking away the reſiſtance which is made by the mere weight of the blood; this reſiſtance will be removed by lying in a horizontal poſition, and of courſe the circulation will be carried on with more eaſe.

In all caſes where we want to make a remarkable derivation from ſome part, whoſe veſſels are ſuppoſed

ſuppoſed to be greatly overloaded, as thoſe of the brain in a phrenzy, or of the lungs in a peripneumony, we are to draw away the requiſite quantity of blood in the ſmalleſt portion of time that can be contrived, becauſe this will tend moſt to the relief of the patient, as we may eaſily comprehend, from calling to mind the nature and conſequences of the vis derivationis, formerly explained: hence the neceſſity of making a large orifice, when we bleed in theſe or the like diſeaſes, or even of opening two veins at one time.

PURGING.—Purging abates intenſeneſs of motion in the vaſcular ſyſtem, on two accounts; firſt, as it draws off a conſiderable quantity of animal fluid, of courſe abating the force of the motory fibres in general, and thoſe of the heart and arterial tunics in particular; and, ſecondly, as it clears the inteſtines of many acrid and ſtimulating matters, which by their ſtay would neceſſarily keep up an unuſual degree of irritation.

Hence it is of great ſervice in all caſes where the motions of the vaſcular ſyſtem are raiſed much above the healthy rate, to ſubjoin the uſe of cathartics to the letting of blood; or even frequently to give them previous to veneſection: a number of particular circumſtances, which cannot now be explained muſt determine the choice, the doſe, and the manner of giving theſe remedies; but we may with propriety lay down ſome ſhort rules with reſpect to the uſe of cathartics in general.

The

The ſubſtances uſed for emptying downwards through the alimentary canal are diſtinguiſhed into ſuch as are lenient, opening the belly but gently; and ſuch as are draſtic, and purge briſkly. Their action conſiſts in irritating the ſenſible fibres of the inteſtines, whereby not only the periſtaltic motion is accelerated, but alſo the ſecretion of mucus and lymphatic vapour, which ouze every where into the cavities of the inteſtines, is increaſed, as well as unuſual quantities of pancreatic juice and bile derived from their ſeveral ſources. Hence we may eaſily judge how great a quantity of humours may be carried off by one briſk purge, and in how ſenſible a degree the whole maſs of fluids may be thereby decreaſed.

Purges are given with different intentions; ſometimes they are meant only to keep the bowels free, and merely to prevent an over-loading of the inteſtinal canal, by an accumulation of fæces; when this alone is required, we only have recourſe to the moſt gentle kind, ſuch as manna, elect. e caſſia, or elect. lenitivum, a few grains of rhubarb, ſome drachms of the oleum ricini; or, if there be a remarkable acidity in the firſt paſſages, the magneſia alba, or in caſes where the bowels are loaded with a viſcid ſlime, a few grains of aloes or of ſcammony.

But in caſes where there is a neceſſity for thoroughly clearing the inteſtinal canal, we muſt adminiſter ſome of the briſker cathartics, of which there is a conſiderable choice, either as to the matter or the form wherein they may be exhibited. Of the ſaline purges, there are the ſal catharticum

ticum glauberi, the ſal polychreſtum, and the ſal rupellenſe, eſpecially the laſt, as being free from that nauſeating taſte peculiar to the other two, which renders them ſcarcely bearable to many ſtomachs: of the vegetable purges, the ſafeſt, without doubt, are rhubarb and ſena; and theſe may be given in the various forms of powder, bolus, infuſion, or tincture.

In caſes where cathartics are wanted to leſſen conſiderably the general maſs of fluids, or to divert them from flowing to any particular place, by carrying off at once a large quantity of humours, we muſt give ſome of the draſtic purges, the ſafeſt of which, and the moſt certain in the operation, is the radix jalapii. This root, powdered and mixed with an equal quantity of nitre, is an exceedingly briſk purge, and ſeldom fails to diſcharge a large quantity of watery humour; hence it is directed to great advantage in all caſes where ſuch an evacuation is neceſſary. Scammony is alſo a very ſafe and briſk purge, and anſwers in the ſame caſes where jalap is proper; but it is more apt to diſappoint in the operation, as it frequently happens to be unſound or adulterated. Gamboge, triturated with cream of tartar, from 12 to 20 grains, is a powerful hydrogogue, and particularly uſeful in dropſies. The ſyrupus e ſpina cervina is alſo a briſk cathartic, but apt to gripe, and occaſion much ſickneſs; however, it has often been found to anſwer particularly well in drawing off large quantities of the watery humours.

Again,

Again, in cafes where the inteftines are loaded with a vifcid flime, or where their fibres feem to have loft much of their fenfibility, fo that the periftaltic motion appears to be in great meafure fufpended, then the aloetic purges are moft proper; or where fomewhat extremely fharp and irritating is required, united with fcammony or colocynth.

But in delicate conftitutions, with great fenfibility and weak blood-veffels, aloetic purges muft be cautioufly avoided; and wherever cathartics are proper in thefe habits, rhubarb is almoft the only thing that can fafely be ventured on.

CLYSTERS.—As there are many cafes wherein it is either improper or inconvenient to give cathartics by the mouth, in thefe we have recourfe to clyfters. The moft common ufe of clyfters is, where the intention is merely to unload the inteftines, and prevent the accumulation of fæces, which by their ftay might create uneafinefs; and where there is fome hazard that the difturbance raifed in the body by a cathartic might add to the difeafe, or bring on fome new fpecies of diftrefs. This is often the cafe during the progrefs of febrile difeafes; and therefore in thefe circumftances we generally prefer clyfters to the giving of purges by the mouth, becaufe it is impoffible to determine the operation of the latter fo precifely as we can that of the former; fince it often happens that where only one ftool is required, yet, if we give fome purging medicine, though even in a fmall dofe, there will follow a number of loofe ftools, perhaps greatly to the difturbance and

and detriment of the patient: clyſters are alſo directed to anſwer other intentions, as well as to unload the inteſtines; but as theſe relate to particular diſeaſes, we ſhall not enter on the ſubject at preſent.

SEDATIVES.—But neither bleeding nor purging are ſo effectual in abating intenſeneſs of motion, and reſtoring regularity to the vaſcular ſyſtem, as thoſe things which have the power of removing ſpaſmodic conſtriction; theſe, from the manifeſt calm which follows their ſucceſsful adminiſtration, are in general termed Sedatives, Coolers, or Febrifuges.

Nitre is uſually placed at the head of this liſt, and without doubt is poſſeſſed of conſiderable powers; the neutral ſaline mixtures, either of the volatile or of the fixed alkali, ſaturated with acids, whether vegetable or mineral, are alſo given with advantage, and are occaſionally found to produce very good effects.

In common practice, nitre is ſeldom given in large enough quantities to do any remarkable ſervice: in fevers of the inflammatory ſpecies, and particularly in that variety of it which is accompanied with ſuch general pain in the fleſhy parts, as to give the name of rheumatic fever, nitre is ſaid to be very efficacious, when taken to the quantity of ſix or eight, or even ten drachms, in the courſe of twenty-four hours; it is ordered however to be diſſolved in a large quantity of thin gruel; the patients who found advantage from this courſe

of

of treatment, it muſt be obſerved, were of the robuſt kind, and in military hoſpitals; in private practice we ſhall perhaps not often meet with ſuch athletic ſubjects; nor when we do meet with them, ſhall we be able to prevail on them to ſwallow ſuch quantities of a drink which is not the moſt palatable. As far as one or two drachms, in a quart of thin gruel, ſweetened with honey, will not be apt to offend the ſtomach; and given in this manner and doſe it conſtitutes the favourite drink of De Haen, with which alone he aſſures us that he cures fevers of all ſorts.

Still later obſervations than thoſe above mentioned, ſhew that the ſtomach can bear conſiderable quantities of nitre; and they alſo ſhew, that if the ſolution be allowed to ſtand for any conſiderable time, the effect, with regard to cooling, is not near ſo evident, as when the draught is ſwallowed inſtantly after the ſolution of the nitre is completed.

Nitre has been ſuppoſed to have the power of thinning the blood, and this has ſeemingly been confirmed by the experiment of mixing it with blood freſh drawn. But all theſe experiments made out of the body are precarious, and we muſt always be cautious how far they influence our practice.

The dulcified ſpirits of nitre and of vitriol are poſſeſſed of the ſedative power, and found to be both grateful and uſeful in abating intenſeneſs of motion, and allaying the ſymptoms which depend on

on this as their immediate cauſe. But perhaps the moſt efficacious of all, and the moſt to be depended on for removing ſpaſmodic conſtriction, and reſtoring equability and freedom to the circulation, are ſome of thoſe things which, being given in large doſes, provoke vomiting; but when taken only in ſmall quantities, are found to promote a diaphoreſis, and determine a flow toward the ſkin.

Theſe are the ipecacoanha-root, and different preparations of antimony; the ſucceſs of theſe things in producing the effects above-mentioned, is evidenced in a multitude of inſtances of fevers, inflammations, and fluxes.

The beſt adapted formulæ, the ſeaſons for adminiſtering, as well as the proper doſes of each, will all be conſidered hereafter; at preſent we ſhall only mention a few circumſtances with relation to the uſe of emetics in general.

EMETICS.—Where nothing more is intended than merely to unload the ſtomach; this end may, for the moſt part, be anſwered, by taking a large draught of camomile tea, or even of ſimple warm water; but where it is evident that there is ſome ſpecies of ſaburra, or that there is an accumulation of bile, or other offenſive matter, which cannot be pumped up without conſiderable force, then we generally have recourſe to the ipecacoan, or to ſome of the antimonial preparations.

Ipecacoan

Ipecacoan is the emetic moſt commonly uſed, and the excellence of this root is, that a very ſmall doſe ſuch as four or five grains, will ſeldom fail to puke a grown perſon as often as is neceſſary, while there is no great danger in giving it to the quantity of half a drachm. But the preparations of antimony have not this certainty in their operation, as ſometimes they operate with great violence, while at other times they ſeem to have no emetic quality; but nevertheleſs, as antimony has a powerful effect in removing ſpaſmodic conſtriction, and promoting the cutaneous diſcharges; and as febrile diſeaſes moſtly begin, and are kept up by this conſtriction, the antimonial emetics are frequently found of great ſervice in the commencement of feveriſh attacks: the ſafeſt way of adminiſtering them is, to diſſolve three or four grains of emetic tartar in as many ounces of any ſimple water, and order one ſpoonful to be taken every ten or fifteen minutes till it operates.

There are ſome circumſtances which ought always to be conſidered before we venture to adminiſter emetics. In the firſt place they ſhould never be given where the florid complexion, and brightneſs or protuberancy of the eyes, together with pain, heavineſs and giddineſs of the head, ſhew that the veſſels of the brain are much loaded; in all ſuch caſes, bleeding, and that in pretty large quantities, ſhould always be premiſed, leſt ſome of theſe overcharged veſſels might be ruptured in the ſtraining to puke. Emetics alſo ſhould be cautiouſly adminiſtered in caſes where we know that

that there has been, or have ſufficient reaſon to apprehend that there may be, a rupture of any conſiderable veſſel in the lungs: neither are they to be given if the ſtomach be inflamed, which may be known by a burning and ſevere pain in the epigaſtric region, accompanied with exceſſive heat; a hard, quick, and weak pulſe; violent thirſt, and conſtant reaching to vomit.

Emetics muſt alſo be avoided in hyſteric or hypochondriac caſes, where the ſtomach is contracted by a ſpaſm, producing great ſickneſs and anxiety, with danger of ſuffocation; nor are they to be given in colics, or the like complaints of the lower belly, when theſe are attended with obſtinate conſtipation.

Emetics are extremely hurtful and dangerous, if taken by perſons who have been lately agitated by the paſſion of anger; and, laſtly, they muſt never be given at any time during the appearance of the menſtrual diſcharge, nor when the period of this natural evacuation is very near at hand.

Theſe are the principal cautions with reſpect to the caſes wherein emetics ought not to be exhibited.

The caſes in general where they are of uſe (beſide thoſe already mentioned) are, when the ſtomach is overloaded, or oppreſſed by a ſurfeit of any kind of food, when any thing of a poiſonous nature has been ſwallowed, or when there is reaſon to apprehend the infection of a putrid fever; for the miaſmata ſeem particularly to mix themſelves

with the ſaliva and ſuccus gaſtricus, and if theſe can be pumped up immediately before the general maſs of humours comes to be infected, the perſon will probably eſcape the diſeaſe.

In the beginning of all febrile diſeaſes, the giving an emetic (with the precautions in regard to bleeding juſt now mentioned) is generally held to be proper.

Emetics are alſo of great ſervice in habits where there ſeems to be an extraordinary viſcidity of the bile, and where this humour is apt to be obſtructed in its paſſage from the gall-bladder to the duodenum, producing different degrees of jaundice: in diſorders of the liver alſo, where this viſcus appears to be overloaded and choked up, theſe medicines, frequently repeated, are of great ſervice, as they not only increaſe the biliary diſcharges, but alſo, by the agitation and preſſure on this and all the other contents of the abdomen, tend greatly to remove obſtructions.

Emetics alſo help to promote expectoration, and tend to free the lungs of viſcid mucus, and thus give relief in the ſpecies of aſthma proceeding from this cauſe; but much more certainly will they relieve a fit of the aſthma, which is owing to ſomewhat oppreſſing and diſtending the ſtomach, and thereby irritating the diaphragm.

A ſtill further uſe of emetics is, to reſtrain hæmorrhages and other diſcharges. We may obſerve ſome traces of this practice in Hippocrates; but the modern uſe of emetics for this purpoſe was

was introduced by the late Dr. Bryan Robinſon of Dublin.

REGIMEN.—In order to facilitate the operation of all theſe various means of allaying intenſeneſs of motion in the vaſcular ſyſtem, we are to keep the patients on ſuch a courſe of diet as ſhall be perfectly light, and not at all irritating.

In every ſpecies of fever, ſickneſs, or at leaſt a loſs of appetite, is an eſſential ſymptom; it is therefore a ſuperfluous caution to ſay, that in theſe caſes we are not to allow the patients ſolid fleſh-meat or broths, becauſe they naturally nauſeate, and refuſe ſuch food, and the things that people chiefly reliſh at theſe times are thoſe which are moſt proper, namely, ſubacid and watery drinks, or at moſt thin gruels, or panada acidulated.

In Ireland, the patients, in all febrile diſeaſes, generally uſe a kind of drink which ſeems almoſt peculiar to this country, and which is extremely grateful, and well-adapted to cool and quench thirſt; it is whey, made of ſour butter-milk and new-milk, boiled up together; hence called Two-milk Whey.

In the commencement of fevers, and while the pulſe continues full and ſtrong, this is the drink which is moſt in uſe, and it appears to anſwer remarkably well; but in places where this two-milk whey cannot be procured, almond-milk, barley-water, ſage-tea, decoction of the roots of couch-graſs; hot water poured on currant jelly, or on ſliced apples, and lemonade, are in their turns to

be given to the ſick perſon; and if there be any appetite for ſomewhat more ſubſtantial, barley or oaten-gruel, panada, roaſted apples, currant jelly, or ſuch light nouriſhment is to be given in ſuch quantities, and at ſuch intervals, as the patients ſhall deſire, and the particular circumſtances of the caſe may ſuggeſt.

In purely inflammatory caſes, and in hectic fevers there is ſometimes no great degree of ſickneſs, and the patients have a deſire for taking more ſolid food than is proper; but in ſuch caſes, it will be the buſineſs of thoſe who have the care of the ſick perſon to ſee that he does not touch ſolid fleſh-meat, or even broth, as long as the intenſeneſs of motion in the vaſcular ſyſtem ſhall continue ſo great as to give ſufficient reaſon to apprehend any danger.

All theſe things are to be conſidered as coolers or ſedatives potentially; but there are others which may be held as coolers in the actual ſenſe, ſuch as drinking cold water, or expoſing the body to cold air; theſe, however, are to be uſed with caution; though if we are to judge from the freedom which is allowed by many practitioners, who inoculate for the ſmall-pox, and who let their patients go out of doors and drink water freely from the pump, while in the height of the eruptive fever, the hazard is not ſo much as hath been generally imagined. There has aſſuredly been much more harm done by confining people in fevers, too cloſely, than ever happened from expoſing them to the open air.

CHAP.

CHAP. II.

General Methods of Cure with reſpect to Remiſſneſs or Suſpenſion of Motion in the Vaſcular Syſtem.

SUCH is the general ſcheme of management when we mean to allay intenſeneſs of motion in the vaſcular ſyſtem; but when we find from the pulſe, and every other circumſtance, that the motions are remiſs, or altogether ſuſpended, then we are to purſue a different method, and endeavour to ſupport and rouze the animal motions by cordials and ſtimulants.

CARDIACS.—Wine, as a raiſer of the pulſe, is perhaps more certain and durable in its effects than any thing the apothecary's ſhop affords; but then there is much caution required before we can venture to deal freely either in this or in the pharmaceutic cordials. It is impoſſible at preſent to diſtinguiſh all the nice circumſtances which may either forbid or encourage their uſe; only this may be laid down in general, that as long as we find, from the heat and drineſs of the ſkin, and from the exceſſive thirſt and coſtiveneſs, that the obſtacles to free circulation have not at all given way, ſo long we ſhould be cautious how we either allow wine, or even ſtrong wine-whey, the volatile alkaline ſalts and ſpirits, confectio cardiaca, pulvis e contrayerva compoſitus, radix ſerpentariæ, or any other things of a like nature, to be given to the patient.

But

But when we find from the moiſture of the tongue, the ſoftneſs of the ſkin, and a cloud in the urine, while the pulſe becomes more calm and full, that the obſtacles are yielding, then we may aſſiſt nature by giving wine, or ſome of the other cordials that have been mentioned.

In caſes where the motions of the vaſcular ſyſtem are greatly ſunk, or actually ſuſpended, we muſt have recourſe to the moſt acrid ſtimulants, ſuch as the volatile alkaline ſalts and ſpirits, and to the application of bliſters or ſinapiſms.

Not but that the application of bliſters is of great ſervice in many caſes where the remiſſneſs is not ſo remarkable, or even ſometimes, where there is great intenſeneſs in regard to the circulation.

BLISTERS.—The uſe of bliſters may be conſidered as being threefold.

1. When they are applied as acrid ſtimulants, to rouze and excite new motions in the living ſolids.

2. As evacuants to promote a diſcharge of acrid ſerum, in caſes where we have reaſon to ſuſpect that any particular part is overloaded. And,

3. In order to allay pains, take off ſpaſm, or abate inflammation.

The diſeaſes which require the acrid ſtimulus of a bliſter are thoſe wherein the pulſe is weak and depreſſed, and where the powers of ſenſe in general

ral are dull and languid, ſuch as they are toward the cloſe of many ſpecies of fever; and alſo in caſes of palſy or coma.

Thoſe which will probably be relieved by the diſcharge of a bliſter are, inflamed eyes, and ſuch diſorders of the head as proceed from a fulneſs of the veſſels in that part; and fixed pains of the rheumatic kind, ariſing, as it is preſumed, from a flow of acrid ſerum.

There are caſes wherein bliſters are applied with a view both to ſtimulate the living ſolids, and evacuate offenſive matter; as in the ſmall-pox, miliary fever or meaſles, when the eruptions ſtrike in, producing coldneſs and oppreſſion: here it is uſual to apply bliſters, in order, if poſſible, to raiſe the pulſe; while, at the ſame time, a part of the offenſive matter ſhall be diſcharged along with the ſerum which flows from the ſkin.

The caſes wherein bliſters are to be applied as antiſpaſmodics, are moſtly thoſe which are termed Hyſterical. Here, for inſtance, we ſhall ſometimes meet with prodigious oppreſſion, and difficulty of breathing approaching to ſuffocation, from mere ſpaſm of the diaphragm, and other muſcles concerned in the action of reſpiration: when we are aſſured that this is actually the cauſe of the diſtreſs, and that the difficulty of breathing does not proceed from an infarction of the lungs, we may depend on obtaining ſpeedy relief from the application of bliſters, and in theſe caſes the legs are the proper places to apply them.

Inflam-

Inflammatory cafes that require the application of blifters are,

(1.) The quinfey, when the plaifter is to be laid, fometimes acrofs the throat, and fometimes behind the ears or between the fhoulders.

(2.) The pleurify, when the application muft be to the fide, or the fpot where the pain is felt; and,

(3.) Inflammations of the inteftines, or other contents of the lower belly, and the blifteringplaifter is applied to fome part of the abdomen.

It is not eafy to make out a fatisfactory theory, as to the way in which blifters procure eafe from pain, in the cafes juft now mentioned, but experience fhews that their application is often highly ferviceable.

Befide blifteringplaifters, it is ufual, on fome occafions, to apply ftimulating poultices of horferaddifh root, muftard-feed, and other acrid fubftances, in order to divert humours from particular places, or to rouze and irritate, in cafes where the powers of life are greatly funk or oppreffed: fuch things applied to the feet have often been found to relieve the head or cheft; and thefe cataplafms are termed Sinapifms, as muftard-feed is always one ingredient; but when they are required to be extremely fharp, it will be proper to add cantharides.

As it is the peculiar property of cantharides, in whatever way they are applied, to affect the urinary paffages, we are always to guard againft this diftrefs,

diſtreſs, by making the patients drink plentifully of common emulſion, or ſome other drink of a ſheathing and mucilaginous nature.

Bliſters promiſe to be of moſt uſe in caſes where the ſoundneſs of the fluids is not much impaired, and where the diſtreſs proceeds from the diſordered ſtate of the living ſolids; therefore we are to conſider them chiefly in the light of ſtimulants, antiſpaſmodics, and anodynes, and not expect much from them as evacuants, except where the diſcharge is kept up for a conſiderable time.

STRENGTHENERS.—All that we are to expect either from bliſtering, or from the cordials formerly mentioned, is, only to give a tranſient force to the languid motions of the vaſcular ſyſtem; in caſes which require that the effects ſhould be more permanent, we muſt have recourſe to ſuch medicines as can really add ſtrength and firmneſs to the living ſolids.

Nothing is found to anſwer theſe intentions with ſo much certainty and ſafety as that moſt valuable drug, the celebrated Bark of Peru; and in chronic caſes, the different preparations of iron, or the natural chalybeate waters, are frequently given with ſucceſs, and found to invigorate the vaſcular ſyſtem.

CHAP.

CHAP. III.

General Methods of Cure reſpecting diſordered Motions of the Nervous Syſtem.

THE ſymptoms which are preſumed to have for their actual cauſes intenſeneſs and irregularity of motion in the nervous ſyſtem are, pain, itching, reſtleſſneſs, ſpaſm, exceſſive ſenſibility and delirium; and the remedies which are found to relieve theſe different ſpecies of diſtreſs are termed, in general, Anodynes and Antiſpaſmodics.

The motions which theſe remedies are intended to regulate, are altogether obſcure, and ſo muſt the modus operandi be equally involved in darkneſs; for, ſince we can only judge of diſeaſes of the nervous ſyſtem from evident defects in the organs of ſenſe and inſtruments of voluntary motion, ſo we can only judge of the virtues of nervous medicines by the changes which we ſee produced in theſe organs.

Pain, and its neceſſary conſequence, inability to ſleep, are among the moſt frequent nervous ſymptoms, ariſing (as we preſume) from a too plentiful diſtribution or exceſs of vibratory motion; and the remedies which procure relief in general are intitled Anodynes. Of theſe, opium is the chief. This admirable medicine, like the Peruvian Bark, is of infinite uſe, and proper in a multitude of caſes, which cannot be ſpecified at preſent.

Beſides

Beſides opium, there is a chemical preparation invented and greatly commended by Hoffman, and which during his lifetime was kept a ſecret, but now generally known, the Liquor Anodynus Mineralis; it is propoſed to be given in caſes where the uſe of opium might be attended with hazard; for, when the vital powers are greatly ſunk, and the pulſe weak, ſmall and quick, opium muſt not be given.

If this liquor anodynus poſſeſſed only half the virtues its inventor ſays it does, it muſt be a valuable medicine; in fact it is ſo, and of late has been much uſed; æther, alſo, which is of nearly the ſame nature, and ſeems to poſſeſs ſimilar virtues with the liquor anodynus, is either applied externally, to places where pain is felt, or given internally in ſome convenient vehicle.

As pain, itching, reſtleſſneſs, erethiſm, and delirium, are preſumed to ariſe from a diſturbance in the nerves particularly deſtined for ſenſation, ſo ſpaſms are ſuppoſed to proceed from a diſturbance in thoſe particularly beſtowed on the muſcular fibres; but whatever be the cauſe of ſpaſms, there are ſome medicines known to have particular powers in allaying theſe diſturbances. The chief of theſe again is opium, to which we muſt add aſa fœtida, caſtor, camphor, muſk, and valerian root; it is frequent to join all or moſt of theſe together, in caſes where powerful antiſpaſmodics are required, ſuch as that terrible diſeaſe the hydrophobia, or that no leſs dangerous one which often ſucceeds wounds of the tendinous parts, the locked-jaw;

or

or in the ſuffocation which is frequently ſeen in hyſteric caſes.

In chronic caſes, ſuch as the epilepſy, where a long continued courſe of medicine is required, there are ſeveral things which at times have been ſaid to poſſeſs extraordinary antiſpaſmodic virtues; ſuch have been the moſs growing on human ſculls, the cranium itſelf; the ungula alcis, the oleum animale, miſletoe of the oak, root of the wild valerian, along with many others; of all theſe, the valerian is the one that has beſt preſerved its reputation; and it certainly has conſiderable virtues, both as a nervous ſtrengthener and as an antiſpaſmodic. Of late it has been thought at Vienna, that the leaves of the orange tree, given in powder or decoction, have cured epilepſies.

In chronic caſes alſo, both of the painful and ſpaſmodic diſeaſes, where an acrid humour may be ſuppoſed to keep up the diſorder; conſtant drains, by the means of iſſues, ſetons, application of the bark of the Garou, or perpetual bliſters, are often found uſeful in carrying off or preventing the accumulation of offenſive matter.

The ſymptoms which ariſe from remiſſneſs and ſuſpenſion of motion in the nervous ſyſtem are, coldneſs, weakneſs, loſs of appetite, and different degrees of ſleepineſs or inſenſibility. Theſe are often accompanied with remiſſneſs and ſuſpenſion in the vaſcular ſyſtem, and require nearly the ſame remedies.

As

As a general nervous ſtrengthener, the cortex ſtands in the foremoſt rank, to which may be occaſionally added, valerian, and the different preparations of iron, or the natural ſolution of that metal in chalybeate waters; and the courſes of all theſe things ought to be aſſiſted by the cold bath, by exerciſe, nouriſhing diet, wholeſome air, and cheerful company.

Of late years a moſt extraordinary theory reſpecting nervous diſeaſes has been broached in France, by Dr. Pomme of Arles, in Rouſillon. He ſuppoſes, that in all the variety of complaints uſually termed vapouriſh or hyſterical, the nerves become tough, and horny, like dried parchment, (raccorni, and raccorniſſement, are his words,) conſequently the way to ſoften and bring them back to the healthy ſtate, is to ſoak the patient in warm water, and fill the bowels with emollient infuſions or decoctions. In his book, which is titled, Traité de Vapeurs, he gives a great number of hiſtories of moſt extraordinary cures indeed, perfected by this ſcheme of treatment, and theſe certified by ſome of the moſt reſpectable names among the medical gentlemen of Montpelier, and places adjoining. Some people however have wrote againſt Dr. Pomme, and he, or his friends, have replied. Though this theory ſeems all imaginary, yet no doubt great advantages may be derived from a prudent uſe of the warm bath, in a multitude of nervous caſes; and nothing but the difficulty of applying it, from the want of a convenient apparatus, has hindered phyſicians from often availing themſelves of this powerful aſſiſtant.

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The eſtabliſhment of public baths in this city has already been found extremely uſeful, and it is hoped will be rendered more ſo, upon further experience.

Strengtheners, ſuppoſed particularly to comfort the head, are termed Cephalics, and, according to the catalogue, are pretty numerous; but the chief of them are Peruvian balſam, and the flowers of roſemary, lavender, and ſuch like fragrant herbs; the compound ſpirit of theſe flowers is remarkably grateful, and often ſerviceable in removing ſickneſs at the ſtomach, and headachs proceeding from ſlight cauſes.

Strengtheners, ſuppoſed to act eſpecially on the lungs and parenchymatous viſcera, are termed Balſamics, and comprehend all the native balſams, ſuch as thoſe of Tolu, Gilead, Canada, and Capivi, Storax and Benjamin. Thoſe which ſtrengthen the ſtomach and help digeſtion, are called Stomachics; moſt of theſe are bitters; namely, the yellow part of orange peel, tops of the leſſer centaury, and of Roman wormwood, camomile flowers, roots of gentian and zedoary, and a root lately introduced, which is ſaid to be an excellent ſtomachic, the Columbo root, brought from Ceylon; as alſo another new drug, the lignum amarum quaſſi, from Surinam; the laſt is an exceedingly ſtrong bitter, without the leaſt degree of aſtringency.

Such things as particularly aſſiſt the ſtomach in freeing itſelf from flatulency, are called Carminatives, and chiefly conſiſt of ſeeds, replete with a heating

heating oil, ſuch as thoſe of aniſe, coriander, carraway, pepper and cardamons, together with the roots of angelica and ginger, and the water diſtilled from the leaves of peppermint.

All theſe things are ſuppoſed to be required when the powers of the nervous ſyſtem are only weakened in part; but where there ſeems to be a ſuſpenſion, and that either the organs of ſenſe or the inſtruments of motion ceaſe to be affected, or to act, then we muſt have recourſe to ſtimulants of the moſt active kind, and ſuch as, by their heating ſharpneſs, ſhall rouze and enliven the whole ſyſtem of living ſolids. Theſe are the very things that have been already mentioned, as proper to ſtimulate and excite the motions of the vaſcular ſyſtem.

CHAP. IV.

General Methods of Cure with regard to correcting offenſive Matters in the firſt Paſſages, and reſtoring Soundneſs to the general Maſs of Fluids.

ALTHOUGH every ſpecies of inability or of diſtreſſing ſenſation immediately depends on ſome diſorder in the motions of either the vaſcular or nervous ſyſtem, yet, in our endeavours to give relief, we are not always to direct our views ſolely to the regulating of theſe motions; as, for example, pain in the ſtomach, and ſickneſs, are certainly owing to ſome diſturbance in the nerves; and

and when this diſturbance ceaſes, the pain and ſickneſs will ceaſe to give diſtreſs.

Let us ſuppoſe a perſon to apply for advice, who is afflicted with the two afore-mentioned complaints, which on examination are found evidently to depend on the preſence of an acid ſaburra; this, from the nature of its ſituation, can eaſily be expelled or corrected, and therefore, inſtead of adviſing opium to allay the pain, or ſome ſtomachic cordial to remove the ſickneſs, we ſhall either direct an emetic to bring up the acid, or ſome magneſia alba, to neutralize and correct it.

In like manner, we ſhall often find people in advanced ſtages of the venereal diſeaſe afflicted with excruciating pains, which keep them whole nights without ſleep; but experience has taught us, that theſe pains are never to be removed until the ſpecific virus which gives riſe to them ſhall be ſubdued or corrected; and therefore we never think of giving anodynes, but fly to the uſe of mercury, which is known to have the power of reſtoring ſoundneſs to the fluids which are vitiated in this particular diſeaſe.

Theſe examples may ſufficiently ſhew that there are many caſes wherein the methods of cure muſt be directed to the expulſion or correction of morbific matters, which are either lodged in the firſt paſſages, or diſorder the general maſs of groſs fluids.

We ſhall firſt lay down the general methods of treatment reſpecting the different ſpecies of ſaburra,

burra, of which it was formerly ſhewn there are five.

The firſt indication with reſpect to all theſe different offenſive matters is uſually to empty the ſtomach by an emetic. If afterwards there ſhould ſtill appear to be a new generation of ſaburra, then we are to endeavour to correct it, by means appropriated to each.

The medicines that have power to obtund and neutralize the acid ſaburra, which is the moſt frequently met with of all the five, are called Abſorbents or Antacids; and conſiſt chiefly of earthy ſubſtances, which effervеſce when an acid liquor is poured on them; ſuch are chalk, crab's eyes, crab's claws, oyſter and egg ſhells, and the magneſia alba.

Theſe ſubſtances, when taken into the ſtomach, mix with the acid humours, neutralize them, and prevent the irritation which might be occaſioned by their ſharpneſs, and thus procure eaſe from pain and ſickneſs.

Formerly there was a theory much in vogue, which aſcribed almoſt every kind of diſeaſe to an acid that was ſuppoſed to contaminate the blood, and produce diſturbance in the animal œconomy: hence it naturally followed, that the way to cure moſt diſeaſes would be to correct this acid; and thus came the faſhion (which ſtill continues with many) of preſcribing abſorbents in almoſt every caſe; without doubt they are ſerviceable in many; and what is no ſmall recommendation, they will ſeldom do any harm.

The bitter, the putrid, and the rancid ſaburra, require nearly the ſame correctives; which are generally known by the titles of Temperants and Diluents, and conſiſt principally of juices of ripe ſubacid fruits.

What is uſually called the anti-emetic mixture, ſalt of wormwood, and juice of lemons, ſwallowed during the efferveſcence, appears to have a peculiar power of correcting a putrid ſaburra, and of reſtraining vomitings occaſioned thereby. * A mixture of hock and ſeltzer water, or, which is ſtill more powerful, as being more ſaturated with the native alcali, the Vahls water, with hock, makes a moſt elegant and grateful draught, in caſes where the bile is in ſuch a ſtate, as to require ſomewhat to correct its ſharpneſs.

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* There are few medicines more frequently ordered than the neutral mixtures, either ſpiritus mindereri, or lemon juice ſaturated with ſalt of wormwood; but though we are every day preſcribing ſal abſinthii, yet it is very well underſtood that there has not been an atom of the real ſalt to be found in the ſhops for many a year paſt; and that the fixed alcaline ſalt with which the druggiſts furniſh the apothecaries is nothing more than either the common pot-aſh, or pearl-aſhes, freed from the groſs impurities. If theſe ſalts were in the ſtate of a pure and mild fixed alcali, there would no great harm enſue, and the phyſician would not have much cauſe to regret the loſs of the ſal abſinthii; but unfortunately they are for the moſt part mixed with lime, which, in proportion to its quantity, muſt render the alcali more or leſs of the cauſtic nature; ſo that when the anti-emetic mixture is ordered, nothing ſo common as to find no efferveſcence enſue, when the ſalt, or its ſolution, is mixed with the lemon juice; conſequently no air is extricated, and the expectations of the preſcriber totally fruſtrated, and inſtead of finding the nauſea allayed, or the vomiting reſtrained, we ſhall hear the patient complain

The viſcid and inſipid ſaburra requires the uſe of attenuants, and theſe are generally bitters, with ſome degree of aromatic warmth; bitters ſeem to prove attenuants by ſtimulating the ſenſible fibres of the ſtomach, and exciting a flow of lymphatic juice, which thins and dilutes the viſcid mucus. But there are medicines which act more immediately in correcting the viſcidity of this mucus, and theſe are, lime-water, and neutral, or fixed alcaline ſalts, ſuch as the tartarus ſolubilis, ſal diureticus, ſal tartari, and ſal ſodæ.

Theſe are the principal alteratives intended for the correction of vitiated matters in the firſt paſſages; as to thoſe which act on the general maſs of fluids, they muſt differ according to the nature of the diſeaſe.

If the general maſs of fluids ſeems poor and watery, as often happens in female ſubjects, the principal remedies muſt be ſought for among the preparations of iron, adapted to the particular circumſtances of the caſe; to which muſt be joined occaſionally, the cortex, and ſtomachic bitters, moderate exerciſe, and the cold bath; rhubarb

complain of a vile taſte in the mouth, and burning heat in the ſtomach.

It is therefore incumbent on the apothecary always to make a trial with his ſal abſinthii, (as the druggiſt calls it to him,) before he begins to make uſe of it; by adding vinegar or lemon juice, and obſerving whether it raiſes a ſufficient degree of ebullition, to ſhew that there has been no mixture of lime. But it would be ſtill better if the apothecaries themſelves would be at the pains of purifying their ſalts, and this they might do from the common ſoda or kelp, from the Spaniſh ſoda, called Barilla; or from the Trieſt aſhes, either of which would give them a pure and a mild fixed alcali.

alſo, in ſmall doſes, from time to time, to keep the inteſtinal canal from being overloaded.

If the blood be tainted with an acrimony of the acid nature, which ſometimes happens to infants, though very rarely ſeen in adults, a courſe of the Vahls, or lime-water, may poſſibly correct this predominant ſourneſs; but if, on the contrary, the general acrimony ſhould appear to be alcaline, like that in a caſe mentioned by Dr. Huxham, of a young man who deſtroyed himſelf by taking immoderate quantities of ſalt of hartſhorn; then the moſt probable ſcheme of relief will be by a diet of milk, and aceſcent vegetables.

Where the acrimony is of a putrefactive nature, the cortex and acid ſpirit of vitriol, with a plentiful uſe of wine and of ſubacid fruits.

And laſtly; in caſes where the acrimony is of a muriatic or ammoniacal nature, producing leprous or impetiginous eruptions, accompanied with heat and itching, the moſt promiſing remedies will then be, ſulphureous waters, and ſuch compoſitions as the pil. Æthiopicæ of the Edinburgh Diſpenſatory, with the aqua calcis magis compoſita, or diet drinks prepared with the ſweetening roots and woods, china, ginſeng, ſarſaparilla, bardana, guaiacum, and ſaſſafras.

Such are the chief alteratives for correcting thoſe kinds of acrimony, which produce no determinate ſpecies of diſeaſe; but as to remedies that have the power of altering morbific matters, which are of a ſpecific nature, we are as yet acquainted with but few.

1. The

1. The morbific matter in remittent and intermittent fevers is ſubdued by the Peruvian Bark.

2. The ſyphilitic virus, if taken in due time, is corrected by different preparations of mercury.

And,

3. The ſcorbutic, by the juices of recent vegetables, or in places where theſe cannot be had, by freſh infuſion of malt, or newly-brewed ſpruce beer.

CHAP. V.

Methods of increaſing particular Secretions and Diſcharges; and Remedies for reſtraining ſuch as are exceſſive.

BESIDE correcting the vitiated qualities of the animal fluids, and diſcharging ſuch groſs and offenſive matters as may either overload or irritate the ſtomach and inteſtines, we frequently have occaſion to promote or increaſe the ſecretion and diſcharges, by the ſkin, by urine, by the ſalivary glands; from the pituitary membrane which lines the noſe and cavities connected therewith; from the larynx and aſpera arteria; and from the uterus; as well as in many caſes to reſtrain the exceſſive flow of blood, or of different ſecreted humours.

Thoſe things which promote the diſcharges above-mentioned are diſtinguiſhed by the different appellations of Sudorifics, Diuretics, Sialogogues, Errhines, Expectorants, and Menagogues.

SUDOR-

SUDORIFICS.—The terms Sudorific and Diaphoretic are, for the moſt part, uſed indiſcriminately for all thoſe things that are ſuppoſed to have the power of promoting and increaſing the cutaneous diſcharges: but, ſtrictly ſpeaking, ſudorifics mean ſuch things as raiſe plentiful ſweat, while diaphoretics do little more than increaſe the inſenſible perſpiration.

Neither ſudorifics nor diaphoretics are by any means ſo certain in their operation as emetics or cathartics. It very ſeldom happens that purging or vomiting will not enſue after taking any of the drugs that have been already mentioned, but we never can be ſure that a ſweat will break out in conſequence of giving any of the things termed Sudorifics. From this great uncertainty concerning their operation, it happens that things of oppoſite ſenſible qualities ſhall occaſionally become ſudorifics; for, in order to raiſe a ſweat, the medicine muſt not only increaſe the circulating force of the fluids, but alſo have power to take off ſpaſmodic conſtriction. Hence all ſtimulating things that have power to irritate the heart and increaſe the blood's progreſſive motion will prove ſudorifics; if, at the ſame time, the cutaneous pores ſhall happen not to be preternaturally cloſed up, or ſtraitened, and on the other hand, all very cooling and ſedative things, whoſe power conſiſts in cauſing an extraordinary relaxation of the cutaneous pores, may occaſionally raiſe a ſweat. Thus drinking fermented liquors or ardent ſpirits, taking ſome of the volatile alcaline ſalts, or other acrid ſtimulants, will, at certain times,

times, prove ſudorific; while a large draught of cold water, or a plentiful doſe of nitre, will at other times, excite the cutaneous diſcharge.

From this we may eaſily infer how little we can depend on the ſudorific virtues, which are aſcribed to a multitude of things by writers on the Materia Medica.

Since, in order to raiſe a ſweat, either the force of the circulating fluids muſt be ſo far increaſed as to overcome the reſiſtance in the extremities of the cutaneous arteries; or their orifices, which open on the ſurface of the body, muſt be ſo far relaxed, that their reſiſtance ſhall not be equal to the force exerted by the heart; the moſt certain way of promoting this diſcharge is, to apply ſuch things to the ſurface of the body as ſhall relax and ſet open the cutaneous pores. Nothing can do this more effectually than warm vapour; and therefore a ſtove or vapour-bath is the moſt certain way of raiſing a plentiful ſweat, which may be increaſed to a very high degree; if at the ſame time that the vapour is applied to relax the pores at the circumference of the vaſcular ſyſtem, ſome ſtimulating drink be plentifully adminiſtered to increaſe the power of the heart, and cauſe a greater force to be exerted from the center.

Such ſweating as this juſt now deſcribed is often found of great uſe in rheumatiſms, and other fixed pains; in ſome ſpecies of dropſy; in cutaneous foulneſſes; and in ſome ſtages of the venereal diſeaſe.

The

The moſt powerful, as well as moſt certain internal ſudorifics, are combinations of antimonials or of ipecacoanha, with opium; the latter is termed Dover's Powder, and ſometimes uſed with ſucceſs in caſes of inveterate rheumatiſm.

The cautions neceſſary to be obſerved, reſpecting the adminiſtration of diaphoretics or ſudorifics in febrile caſes, have been already laid down (Chap. II.) under the head of Cardiacs.

DIURETICS.—Diuretics and ſudorifics are nearly allied; for the ſame things that have the power of raiſing plentiful ſweat, when encouraged by the warmth of thick bed-clothes, or the application of hot vapour, and drinking freely of warm liquors, prove powerful diuretics, when the ſurface of the body is kept cool, and nothing heating is taken at the ſame time.

Diuretics are almoſt as uncertain in their operation as ſudorifics, and it is owing to this uncertainty with reſpect to both, that we are ſo often foiled in our attempts to cure dropſies: if we could with as much certainty raiſe plentiful ſweats, and increaſe the diſcharge of urine, as we can vomit or purge, we ſhould ſeldom fail in curing a dropſy, ſince by theſe means we might carry off the ſuperfluous and ſtagnating lymph which conſtitutes the diſeaſe.

It is true, there are ſome things that particularly affect the urinary organs, and promote the diſcharge peculiar to them; but theſe are of ſuch a dangerous nature, that they are not to be raſhly uſed.

uſed. If cantharides, and the root of the colchicum autumnale were not ſo exceedingly acrid, and violent in their operation, they might ſometimes be of uſe.

The mild diuretics which we moſt commonly uſe are the roots of the ſquill or ſea-onion, in ſmall doſes; of fennel, parſley, aſparagus, and horſe-raddiſh; the ſeeds of wild carrot and muſtard; the berries of juniper; the green tops of the geniſta or broom, in decoction; turpentine and other balſams of ſimilar qualities; ſoap; ſalt of tartar; diuretic ſalt; and dulcified ſpirit of nitre.

The caſes in general which indicate the uſe of diuretics are thoſe wherein there appears to be a load of ſlimey or earthy matter in the urine; as alſo in dropſies, or other diſeaſes where the quantity of this diſcharge is evidently below the healthy proportion.

But as the difficulties attending this particular ſecretion and diſcharge may, and frequently do, ariſe from different ſources, ſo muſt the methods be varied which are intended to remedy them.

With reſpect to the operation of both diuretics and ſudorifics, the reader is recommended to Alexander's Experimental Eſſays, wherein he will find many curious, as well as uſeful, experiments and obſervations.

SIALOGOGUES.—There are particular caſes wherein it has been thought neceſſary to increaſe the diſcharge of ſaliva, in order to free the conſtitution from acrid and offenſive matters, particularly

particularly the virus, which cauſes the venereal diſeaſe, or that which ſometimes produces corroding ulcers, and a variety of eruptions and cutaneous foulneſs, generally, though falſely, termed Scorbutic.

There is but one remedy that can with propriety be termed a ſialogogue, as having the peculiar property of increaſing the ſecretion and diſcharge of ſaliva, and this is mercury; the particular manner of management when a ſalivation is to be raiſed, ſhall be explained on a future occaſion; but we may obſerve in the mean time, that, in modern practice, ſalivations are not raiſed, intentionally, near ſo often as they uſed to be formerly.

As to thoſe things called Maſticatories, ſometimes uſed to draw off mucus from the fauces and inſide of the mouth, they are not to be conſidered as ſialogogues; theſe maſticatories are acrid ſubſtances, which when chewed promote the flow of humour; the thing chiefly uſed in this way is the radix pyrethri, which is ſometimes found to eaſe the tooth-ach, and help to take down ſwellings of the gums. The ſmoking of tobacco, or of other acrid herbs, will anſwer much the ſame purpoſes; and when uſed medicinally, not from habit, may be of ſervice in drawing off lymph or mucus from the glandular tunics about the fauces, and inſide of the noſe; and in this way divert humours from the eyes, or perhaps eaſe pains of the head.

EXPECTORANTS.—Thoſe things which help to throw off that ſuperabundant mucus, which frequently diſturbs the action of the lungs, by tickling

ling the larynx, and ſtuffing up the pulmonary veſicles, are called expectorants.

Emetics, in ſmall doſes, will ſometimes act as expectorants, whence the uſe of adding oxymel ſcilliticum, antimonial wine, or emetic tartar to the infuſions or decoctions of the pectoral herbs and roots, ſuch as hyſſop, horehound, maidenhair, coltsfoot, and groundivy, liquorice and elicampane; it is uſual alſo to preſcribe linctuſes, or oily mixtures of ſpermaceti, oil of ſweet almonds, and different ſyrups or conſerves, and to acidulate theſe with ſpirit of vitriol, or ſharpen them with ſpirit of hartſhorn; honey is a powerful expectorant, and gum ammoniacum has conſiderable virtues in this reſpect, either given in ſolution, or combined with ſoap and a due proportion of radix ſcillæ ſiccata, in the form of pills.

ERRHINES.—As to thoſe things termed Errhines or Sternutatories, which increaſe the flow of mucus to the membranes lining the inſide of the noſe, and the various ſinuſes communicating therewith, though we find them regularly mentioned in the ſyſtematic writers, yet they are very ſeldom brought into common practice.

The caſes where they may moſt probably be of uſe are in comatous diſeaſes, and where there ſeems to be a remiſſneſs in the nerves belonging to the organs of ſight or hearing; here a repetition of the action of ſneezing, from the great and univerſal ſhake which it gives to the whole frame, may ſometimes happen to be of ſervice. The ſubſtances which will produce this effect are the powder of white

white hellebore root, or euphorbium, in a very ſmall quantity, mixed either with common ſnuff, or with the powders of what are generally termed Cephalic Herbs; namely, betony, lavender, balm and roſemary.

MENAGOGUES.—Here again we find, that drugs of oppoſite natures may be uſed at different times, according to different circumſtances, in order to anſwer the ſame end; as the menſes may ceaſe to appear at the natural periods, or may be defective in regard to quantity, from various and even oppoſite cauſes.

Sometimes the menſes are deficient from mere want of ſtrength in the veſſels, and poorneſs of the blood; here the remedies to reſtore health muſt be of the ſtrengthening kind; chalybeates, and the cortex.

At other times an overfulneſs and too great rigidity of the vaſcular ſyſtem in general will prevent this natural and periodical diſcharge; conſequently bleeding, purging, warm-bathing, and attenuating medicines will probably produce the deſired effect.

The particular medicines, and manner of adminiſtration, will be pointed out hereafter: but no caſes are more difficult to manage, and ſo ſeldom admit of a thorough cure, as thoſe wherein the menſes have been ſuddenly ſtopt, by imprudently taking things of an aſtringent quality, putting on damp linen, or otherwiſe catching cold; or in conſequence of ſome fright or other agitation of mind.

ASTRIN-

ASTRINGENTS.—When either ſanguineous or humoral diſcharges come to be ſo exceſſive as to bring on weakneſs and waſting, they will require to be reſtrained.

In the active fluxes, which depend chiefly on ſpaſmodic conſtriction, and intenſeneſs of motion in the vaſcular ſyſtem, the methods of cure are to be conducted on the ſame principles as have been already laid down in reſpect of fevers and inflammations; and bleeding with ſedatives, muſt be the principal remedies: at other times, when the flux is paſſive, and mere relaxation of the veſſels or ſolution of continuity the chief cauſe, then we muſt have recourſe to aſtringents; the moſt powerful of which are certain preparations of iron, allum, galls, oak-bark, logwood, pomegranate peel, red roſe buds, tormentil root, and terra japonica; but theſe are to be directed under ſuch a variety of reſtrictions, which have reference to particular circumſtances, that nothing can be laid down concerning their general uſe, further than that we ſhould always be on our guard (either in caſes of hæmoptyſis or of alvine fluxes) how we interpoſe with aſtringents, as long as any coagulated blood, or any very acrid matter continues pent up in the lungs, or lodged in the inteſtinal canal.

RESTORATIVES.—When the conſtitution has been much exhauſted, and emptied by profuſe diſcharges or evacuations, we muſt endeavour to fill up the veſſels by light nouriſhment, ſuch as the ſtomach can eaſily bear, and readily digeſt; as

to

to pharmaceutical reſtoratives, we have little to expect from them.

But as in thoſe caſes, the action of the digeſtive organs is uſually ſo much weakened, that food cannot be taken in ſufficient quantity, or if taken, not properly turned into nouriſhment, our firſt views muſt be to ſtrengthen the ſtomach, and hinder the firſt paſſages from being overloaded; hence ſmall doſes of rhubarb, joined with ſtomachic bitters, muſt begin the cure, and when by theſe means the digeſtive organs appear to have recovered their tone, the patient may take freely of aſſes-milk, light jellies, chicken-broth, or that ſort of thin beef-broth, uſually called Beef-tea. When theſe have been ſome days in uſe, and appear to ſit well, we may then allow more ſolid food, and perhaps call in the further aid of pharmacy, in order to brace up and ſtrengthen, to which end nothing will contribute more than aromatic bitters, in ſome convenient form, with the acid elixir of vitriol.

From this ſhort ſketch of the Therapeia, we may perceive that the general methods of cure are not very complex, at leaſt with reſpect to the firſt claſs of diſeaſes.

As to thoſe of the ſecond claſs, a greater variety of management is required, which renders it impoſſible to lay down any general ſcheme for the treatment of local diſeaſes, ſince many of them, beſide internal remedies, the adminiſtration of which is founded on the foregoing plan, demand the aſſiſtance of ſurgery and different topical applications; ſuch as emollients to relax and ſoften; robor-

ants

ants to brace up and ſtrengthen; diſcutients and repellents to diſperſe ſwellings; maturants or ſuppuratives to ripen them, or favour the formation of matter; digeſtives to promote the diſcharge from wounds, burns, and ulcers; detergents to cleanſe away foul ſloughs; epulotics to cicatrize; refrigerants to cool; calefacients to ſtimulate and increaſe heat; antiſpſorics and coſmetics to remove cutaneous eruptions and foulneſſes.

Theſe are applied in the various ways and forms of cataplaſm, epithem, plaſter, cerate, ointment, liniment, vapour, fotus, lotion, injection, and embrocation.

Then, as to ſexual diſeaſes; ſuch as are general, but proper to males, demand nothing peculiar (indeed there are not more than two diſeaſes that can well be conſidered in this light:) but thoſe which are general and proper to females always require that particular attention be given to the patient's age, and ſituation with reſpect to the menſes, and whether ſhe be pregnant, lying-in, or nurſing.

Moſt part of the local diſeaſes proper to males are the conſequences of venereal infection, and therefore, beſides the neceſſary ſurgical treatment, and common topical remedies, will require the aid of mercurials. The treatment of local diſeaſes in females muſt be regulated according to the nature of the part affected.

The diſeaſes of children acquire their peculiarity from the weak ſtate of the bowels, the extreme mobility of the nervous ſyſtem, and the flabby relaxed

laxed ſtate of the general ſolid texture. And therefore, the treatment during this tender period muſt be ſo conducted as to have a particular attention to theſe three circumſtances. Hence the neceſſity for frequent cathartics and emetics to evacuate the viſcid or acid ſaburra: and of antacids or abſorbents to correct it; and for the cold bath to abate the ſenſibility of the living ſolids, and give firmneſs to the texture in general.

END OF THE FIRST PART.

APPEN-

APPENDIX:

CONTAINING A

ABSTRACT of the different METHODS

OF

CLASSING DISEASES,

According to the reſpective SCHEMES of

Sauvages, Linnæus, Vogel, and Cullen;

Extracted from Dr. Cullen's Synopſis Noſologiæ Methodicæ.

METHOD OF SAUVAGES.

SAUVAGES diſtributes all the diſeaſes to which the human body is liable, into 10 Claſſes; 43 Orders; and 315 Genera.

Claſſis I. VITIA. Symptomata cutanea levidenſia, vel mechanicis chirurgiæ auxiliis curanda.

Ordo I. MACULÆ. Coloris nativi mutationes. Harum ſunt Genera 6.

II. EFFLORESCENTIÆ. Tumores humorales, exigui, gregales, vel cutis elevatio per puſtulas, papulas, phlyctænas, varos, ſimileſve aſperitates. Gen. 4.

III. PHYMATA. Tumores humorales notabiles, ſolitarii. Gen. 12.

Ordo IV. EXCRESCENTIÆ. Tumores a ſolidis adauctis, indolentes, lente creſcentes, in ſuppurationem ſponte non abeuntes. Gen. 9.

V. CYSTIDES. Protuberantiæ factæ a fluidis intra membranas proprias vel alienas maxime dilatatas contentis, vel receptacula quævis diſtendentibus. Gen. 10.

VI. ECTOPIÆ. Partium ſolidarum e ſua ſede dimotio, ſenſibus obvia. Gen. 21.

VII. PLAGÆ. Solutiones continui. Gen. 16.

Claſſis II. FEBRES. Pulſus magnitudo et frequentia cum frigore in inſultu, fervore in decurſu, madore in declinatione, et ſemper virium proſtratione majori quam a virium vitalium gradu foret expectandum.

Ordo I. CONTINUÆ. Impetus febrilis a frigore ſæpius exordiens, ſine exacerbatione partiali, et ſine acceſſu, non pluries quam ſemel vel bis in menſe revertens, ad uſque finem ægritudinis perſeverat. Gen. 5.

II. REMITTENTES. Pyrexia pluries in decurſu morbi creſcit, et decreſcit, non omnino recedit, typus ſæpe confuſus. Gen. 3.

Ordo

Ordo III. INTERMITTENTES. Pyrexia pluries in decurſu ægritudinis deſerit et recurrit, cum intervallis lucidis. Gen. 4.

Claſſis III. PHLEGMASIÆ. Pyrexia continua vel remittens, cum interna inflammatione, vel cum exanthematis.

Ordo I. EXANTHEMATICÆ. Eruptiones cutaneæ cum pyrexia ſæpius maligna, quandoque lenta. Gen. 10.

II. MEMBRANACEÆ. Pyrexia magna typo ſynochæ vel ſynochi cum dolore viſceris cujuſdam. Gen. 8.

III. PARENCHYMATOSÆ. Dolor obtuſus, calor et tumor in viſceribus farctis, non facciformibus, cum pyrexia acuta, ſuppurationis apparatu. Gen. 7.

Claſſis IV. SPASMI. Contractio invita conſtans vel interpolata, muſculorum organis locomotivis non vitalibus inſerventium.

Ordo I. TONICI PARTIALES. Rigiditas & immobilitas artus vel organi determinati. Gen. 6.

II. TONICI GENERALES. Rigiditas totius fore corporis. Gen. 2.

III. CLONICI PARTIALES. Agitatio invita et coacta cujuſdam organi vel artus, cujus motivum non percipitur. Gen. 8.

Ordo IV. CLONICI GENERALES. Spaſmi clonici vel totius corporis, vel ad plures partes extenſi. Gen. 6.

Claſſis V. ANHELATIONES. Agitatio invita, defatigans, muſculorum pectoris, unde reſpiratio difficilis, frequens, ſine febre acuta.

Ordo I. SPASMODICÆ. Inſultus fugaces, ſed ſæpius iterati, ſpaſmodicorum motuum pectoris cum expiratione ſonora. Gen. 5.

II. OPPRESSIVÆ. Non fugaces, ſed conſtantes reſpirandi difficultates, cum pectoris non rarò oppreſſione, frequenti anhelitu, difficultate ejus ſuſpendendi, ſine metu ſuffocationis. Gen. 9.

Claſſis VI. DEBILITATES. Impotentia clare & diſtincte ſentiendi, appetendi, conſueta vi artus organave movendi, nec non imaginandi, vigilandi, &c.

Ordo I. DYSÆSTHESIÆ. Impotentia clare ac diſtincte ſentiendi ſine ſopore. Gen. 10.

II. ANEPITHYMIÆ. Appetituum ſenſitivorum debilitas notabilis, vel ſuppreſſio inſolita ſine ſopore. Gen. 3.

III. DYSCINESIÆ. Impotentia motus ac ſæpius ſenſus in organis libertati ſubditis, ut lingua, larynge, artubus. Gen. 7.

Ordo

Ordo IV. LEIPOPSHYCHIÆ. Motuum viriumque vitalium debilitas. Gen. 4.

V. COMATA. Senſus omnis, appetitus, motus liberi, phantaſiæ, memoriæque feriationes. Gen. 7.

Claſſis VII. DOLORES. Cujuſve experientia cognoſcendi, nulla definitione explicabiles ſunt.

Ordo I. VAGI. Dolores & moleſtiæ vagæ ſæpius univerſales aut cutaneæ ad phlegmaſias non referendæ. Gen. 10.

II. DOLORES CAPITIS. Scilicet vel capillitii vel faciei. Gen. 6.

III. DOLORES PECTORIS. Dolores cordis et oeſophagi anhelationis expertes. Gen. 3.

IV. DOLORES ABDOMINALES INTERNI. Gen. 8.

V. DOLORES EXTERNI ET ARTUUM. Gen. 6.

Claſſis VIII. VESANIÆ. Error in imaginatione, appetitu, vel judicio.

Ordo I. HALLUCINATIONES. Errores imaginationis ſalvo intellectu ab organorum externorum vitio. Gen. 6.

II. MOROSITATES. Cupiditates aut averſationes depravatæ. Gen. 10.

III. DELIRIA. Errores mentis judicantis. Gen. 5.

IV. VESANIÆ ANOMALÆ. Morbi prioribus affines. Gen. 2.

Claſſis

Claſſis IX. FLUXUS. Ejectio fluidorum aut contentorum quæ quantitate, qualitate, deſuetudine notabilis eſt.

Ordo I. SANGUIFLUXUS. Sanguinis vel ſanguinolentæ materiæ ejectio ſine alvi fluxu. Gen. 7.

II. ALVI FLUXUS. Materierum in primis viis contentarum vitioſa per os aut anum rejectio. Gen. 12.

III. SERIFLUXUS. Fluxus quivis non cruentus nec alvinus. Gen. 14.

IV. AERIFLUXUS. Flatus, halituſve vitioſa emiſſio. Gen. 3.

Claſſis X. CACHEXIÆ. Coloris, figuræ, molis in corporis habitu depravatio.

Ordo I. MACIES. Corporis partium mollium extenuatio. Gen. 4.

II. INTUMESCENTIÆ. Deformitates a volumine adaucto. Gen. 6.

III. HYDROPES PARTIALES. Tumores majores ſed non univerſales, a fluido intra cavum capitis, abdominis, uteri, vel veſicæ contento. Gen. 9.

IV. TUBERA. Tumores partium ſolidarum non hydropici. Gen. 6.

V. IMPETIGINES. Morbi chronici, ſæpius contagioſi qui cuti excreſcentias, tumores gregales, exulcerationes, cruſtas, &c. inducunt. Gen. 6.

Ordo

Ordo VI. Icteritiae. Totius cutis color inassuetus sine pyrexia acuta.
Gen. 4.

VII. Cachexiæ anomalæ. Gen. 6.

METHOD of LINNÆUS.

LINNÆUS makes 11 Classes [illegible] Orders; and 326 Genera.

Classis I. MORBI FEBRILES EXANTHEMATICI. Febris cum efflorescentia cutis maculata.
Horum sunt Ordines III.
Genera 10.

II. CRITICI. Febris cum urinæ hypostasi lateritia.
Ord. III.
Gen. 14.

III. PHLOGISTICI. Febris cum pulsu duro dolore topico.
Ord. III.
Gen. 15.

IV. MORBI DOLOROSI. Doloris sensatio.
Ord. II.
Gen. 25.

V. —— MENTALES. Judicii alienatio.
Ord. III.
Gen. 25.

Classis

Claſſis VI. MORBI QUIETALES. Motus abolitio.
Ord. III.
Gen. 31.

VII. —— MOTORII. Motus involuntarius.
Ord. II.
Gen. 25.

VIII. —— SUPPRESSORII. Meatuum impeditio.
Ord. II.
Gen. 26.

IX. —— EVACUATORII. Fluidorum evacuatio.
Ord. V.
Gen. 37.

X. —— DEFORMES. Solidorum facies mutata.
Ord. III.
Gen. 18.

XI. VITIA. Externa palpabilia.
Ord. VIII.
Gen. 100.

METHOD

METHOD OF VOGEL.

VOGEL alſo makes 11 Claſſes, but does not divide them into Orders throughout, only diſtinguiſhing the Genera; of which he enumerates 560.

Claſſis I. FEBRES. Innati calor: augmentum praeternaturale, cum oris ſiccitate & gravitate corporis.
ORDINES V.—& Genera 80.

II. PROFLUVIA. Humorum evacuatio, ab ordine, quantitate, aut qualitate naturali abhorrens.
ORD. II.—Gen. 45.

III. EPISCHESES. Excernendorum ſuppreſſiones.
Gen. 8.

IV. DOLORES. Senſationes moleſtæ corporis vel animi tranquillitatem turbantes.
Gen. 46.

V. SPASMI. Solidorum mobilium contractiones vel agitationes.
Gen. 42.

VI. ADYNAMIÆ. Senſationum motuum, naturaliumve functionum defectus, aut imminutiones.
Gen. 63.

Claſſis

Classis VII. HYPERÆSTHESES. Sensationes auctæ vel perversæ.
Gen. 19.

VIII. CACHEXIÆ. Male colorata corporis constitutio cum debilitate.
Gen. 25.

IX. PARANOIÆ. Mentis aberrationes.
Gen. 12.

X. VITIA. Mutationes in superficie corporis conspicuæ.
Gen. 170.

XI. DEFORMITATES. Aberrationes solidorum ab ordine, positura, habitu, figura, numero aliisque qualitatibus.
Gen. 50.

METHOD of CULLEN.

DR. CULLEN makes 4 Classes, 19 Orders, and 133 Genera.

Classis I. PYREXIÆ. Post horrorem pulsus frequens, calor major, viribus artuum imminutis.

Ordo I. FEBRES. Prægressis languore, lassitudine, et aliis debilitatis signis, pyrexia sine morbo locali primario.

Genera

Genera 6.—*Tertiana.*
Quartana.
Quotidiana.
Synocha.
Typhus.
Synochus.

Ordo II. PHLEGMASIÆ. Pyrexia; phlegmone vel dolor topicus, simul læsis partis internæ functione. Sanguis missus, et jam concretus, superficiem coriaceam albam ostendens.

Genera 17.—*Phlegmone.*
Opthalmia.
Phrenitis.
Cynanche.
Peripneumonia.
Pleuritis.
Carditis.
Peritonitis.
Gastritis.
Enteritis.
Hepatitis.
Splenitis.
Nephritis.
Cystitis.
Hysteritis.
Rheumatismus.
Arthritis.

III. EXANTHEMATA. Post febrem phlegmasia, plerumque phlegmonæ plures exiguæ per cutem sparsæ.

Genera 10.—*Erysipelas.*
Pestis.

Vari-

Variola.
Varicella.
Rubeola.
Miliaria.
Scarlatina.
Urticaria.
Pemphigus.
Aptha.

Ordo 4. HÆMORRHAGIÆ. Pyrexia cum profusione sanguinis absque vi externa; sanguis missus ut in phlegmasiis.

Genera 4.—*Epistaxis.*
Hæmoptysis.
Hæmorrhois.
Menorrhagia.

V. PROFLUVIA. Pyrexia cum excretione aucta naturaliter non sanguinea.

Genera 2.—*Catarrhus.*
Dysenteria.

Classis II. NEUROSES. Sensus et motus læsi sine pyrexia, et sine morbo locali.

Ordo I. COMATA. Motus voluntarii imminuti cum sopore sive sensuum feriatione.

Genera 2.—*Apoplexia.*
Paralysis.

II. ADYNAMIÆ.

Genera 4.—*Syncope.*
Dyspepsia.
Hypochondriasis.
Chlorosis.

Ordo

Ordo III. SPASMI. Muſculorum, vel fibrarum muſcularium motus abnormes.

Genera 15.—*Tetanus.*
Triſmus.
Convulſio.
Raphania.
Epilepſia.
Palpitatio.
Aſthma.
Pertuſſis.
Pyroſis.
Colica.
Cholera.
Diarrhœa.
Diabetes.
Hyſteria.
Hydrophobia.

IV. VESANIÆ. Mentis functiones læſæ ſine pyrexia vel comate.

Genera 4.—*Amentia.*
Melancholia.
Mania.
Somnium.

Claſſis III. CACHEXIÆ. Totius vel magnæ partis corporis habitus depravatus; ſine pyrexia primaria vel neuroſi.

Ordo I. MARCORES. Corporis totius macies.

Genera 2.—*Tabes.*
Atrophia.

II. INTUMESCENTIÆ. Totum vel magna corporis pars extrorſum tumens.

Genera

Genera 13.—*Polyſarcia.*
Pneumatoſis.
Tympanites.
Phyſometra.
Anaſarca.
Hydrocephalus.
Hydrorachitis.
Hydrothorax.
Aſcites.
Hydrometra.
Hydrocele.
Phyſconia.
Rachitis.

Ordo III. IMPETIGINES. Cachexiæ cutem et externum corpus præcipue deformantes.

Genera 8.—*Scrophula.*
Syphilis.
Scorbutus.
Elephantiaſis.
Lepra.
Frambæſia.
Trichoma.
Ictterus.

Claſſis IV. LOCALES. Partis, non totius corporis affectio.

Ordo I. DYSÆSTHESIÆ. Senſus depravati aut deleti ex organorum externorum vitio.

Genera 8.—*Caligo.*
Amblyopia.
Dyſecoea.
Paracuſis.

Paracuſis.
Anoſmia.
Agheuſtia.
Anæſtheſia.
Anaphrodiſia.

Ordo II. Dyscinesiæ. Motus impediti vel depravati ex organorum vitio

Genera 6.—*Aphonia*
Mutitas.
Paraphonia.
Pſelliſmus.
Strabiſmus.
Contractura.

III. Apocenoses. Fluxus, ſive ſanguinis aut humoris alii ſolito ulterius profluens, ſine pyrexia, impetuve fluidorum aucto.

Genera 6.—*Profuſio.*
Epiphora.
Ptyaliſmus.
Enoureſis.
Gonorrhœa.

IV. Epischesis. Excernendorum ſuppreſſio.

Genera 3.—*Obſtipatio.*
Iſchuria.
Amenorrhœa.

V. Tumores. Partis magnitudo aucta non phlegmonodea.

Genera 14.—*Aneurisma.*
Varix.
Ecchymoma.
Scirrhus.
Cancer.
Bubo.
Sarcoma.
Verruca.
Clavus.
Tabia.
Ganglion.
Hydatis.
Hydarthus.
Exostosis.

Ordo VI. Ectopiæ.—Pars ex sua sede dimota tumorem faciens.

Genera 3.—*Hernia.*
Prolapsus.
Luxatio.

VII. Dialyses. Solutio continui visu tactuve manifesta.

Genera 7.—*Vulnus.*
Ulcus.
Herpes.
Tinea.
Psora.
Fractura.
Caries.

End of the First Volume.